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Technical Report

National Assessment Program – Literacy and Numeracy (NAPLAN) 2013 Central Analysis of Data

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CHAPTER 1. INTRODUCTION AND OVERVIEW

Best practice for educational assessment programs dictates public reporting of results and the statistical and psychometric analyses that led to these results. Commonly, these analyses are summarised in an annual Technical Report. A well-documented technical report provides the transparency that measurement professionals, educators, and the general public expect and builds confidence that the results of such assessments are reliable, valid, and fair. To satisfy this important expectation, the Australian Curriculum, Assessment and Reporting Authority (ACARA) has commissioned this technical report for National Assessment Program – Literacy and Numeracy (NAPLAN) 2013.

Pearson and the University of Western Australia (UWA), ACARA's primary psychometric contractors for NAPLAN, were appointed to undertake the central analyses of data for the 2013 NAPLAN administration. The NAPLAN 2013 tests were administered nationally to all students in Years 3, 5, 7 and 9 in May 2013. Students in each year level were assessed using the same test items in the five domains of reading, writing, language conventions (spelling, grammar and punctuation) and numeracy.

NAPLAN results are reported using five national achievement scales, one for each of the assessed aspects of literacy – reading, persuasive writing, spelling, and grammar and punctuation – and one for numeracy. Each NAPLAN achievement scale spans Years 3, 5, 7 and 9 with scores that range from approximately 0 to 1000. There are also ten proficiency bands that span Years 3, 5, 7 and 9. Each year level is reported against six of these bands.

As in previous years, the central analyses were carried out in two stages. The first stage involved item and test analyses and construction of reporting scales and score-equivalence tables for the 2013 tests. The vertical reporting scales in the five domains were equated onto the historic NAPLAN reporting scales to ensure that NAPLAN results were comparable across years from 2008 to 2013. The equating was achieved using data collected by administering the secure equating tests and the 2013 NAPLAN tests to a sample of Australian students. The equating forms for each domain and year level had already been scaled onto the historical NAPLAN scale in 2009. The equated reporting scale information with score-equivalence tables for the tests and cut points for proficiency bands provided the necessary information for the jurisdictions to report back to parents and schools.

The second stage involved analyses of the full cohort data that informed national reporting. The analyses provided performance results for the preparation of the NAPLAN 2013 Summary Report, the NAPLAN 2013 National Report, and for other reporting.

Over one million students in Years 3, 5, 7 and 9 in all states and territories of Australia participated in NAPLAN 2013. Test data based on student responses were delivered to the Pearson/UWA analysis team from the jurisdictional Test Administration Authorities. There were eight sources of data from the national testing corresponding to the eight states and territories of Australia.

The main aim of this report is to describe and document the methodology used to produce the NAPLAN 2013 assessment scales and the methodology used to report on the performance of the 2013 student cohort. It includes descriptions of test calibration, equating and scale construction processes, and outlines the steps in the analysis. The NAPLAN 2013 test design is described in Chapter 2. This chapter describes each test in terms of the number and type of

items used for each domain and strand level. Chapter 3 provides a summary of the methodology used in sampling for equating and calibration, and presents the participation rates. Chapter 4 is the analysis procedure and methodology chapter and describes the scaling and equating procedures. Chapter 5 describes the data preparation process, test calibration outcomes, and differential item functioning (DIF) analysis outcomes. Test reliabilities, average item discrimination and illustrative tables and figures showing item location, fit and DIF are included in this chapter. The NAPLAN vertical, horizontal and pair-wise equating processes are described in Chapter 6. Graphs showing the equating process, including link reviews, and the shift factors are included in that chapter. Translation constants and equating error calculations are also presented. Finally, Chapter 7 describes the generation of student proficiency estimates, scale transformation procedures and methodology used for reporting of NAPLAN performance in 2013. Many of these procedures are similar, if not identical, to those used in the Programme for International Student Assessment (PISA). The first appendix is an equating and calibration sampling report from a sub-contractor. The remaining appendices contain classical item analyses, Rasch-based item analyses, item characteristic curves, variable maps and DIF analysis graphs.

This report does not include student performance results. The results are included in the 2013 NAPLAN National Report. The NAPLAN national reports can be found at <http://www.nap.edu.au/results-and-reports/national-reports.html>.

ACARA is pleased to present this technical report to all interested organisations and individuals. We anticipate expanding the analyses presented herein as part of our ongoing review of all practices. We invite users of this document to provide feedback on its value and welcome any suggestions to improve both this document specifically and NAPLAN procedures in general.

CHAPTER 2. NAPLAN TEST DESIGN

Four tests were administered at each of Years 3, 5, 7 and 9. The four tests were reading, writing, language conventions (spelling, and grammar and punctuation) and numeracy. The test results were reported in five domains: reading, writing, spelling, grammar and punctuation, and numeracy.

In reading, language conventions (spelling, and grammar and punctuation) and numeracy, there was a mix of multiple-choice items and constructed-response items. The multiple-choice (MC) items were of standard format with a number of possible answers (usually four) from which students were required to select the best answer. The constructed-response (CR) items generally required a numeric answer, a word or a short phrase. All MC and CR items were dichotomously scored (correct or incorrect).

Each of the Year 7 and Year 9 numeracy tests consisted of two forms. The use of calculators was permitted in the first form (calculator form) but not in the second form (non-calculator form). For Years 7 and 9, both the calculator form and the non-calculator form consisted of 32 items, giving a total of 64 items for each year level with the two forms combined. Year 3 and Year 5 numeracy tests were non-calculator forms that consisted of 35 and 40 items respectively.

Tables 2.1 to Table 2.4 provide information on the structure of each of the numeracy, reading, spelling, and grammar and punctuation tests in Years 3, 5, 7 and 9.

Table 2.1. Structure of Year 3 Test Domains, NAPLAN 2013

Domain	Strand	Number of MC Items	Number of CR Items	Total for Strand	Total in Test
Numeracy	Measurement, Chance and Data	9	1	10	35
	Space	8	3	11	
	Number	8	3	11	
	Algebra, Function and Pattern	1	2	3	
Reading	Text Location and Interpretation	25	1	26	36
	Text and Language Knowledge	4	1	5	
	Contextual Understanding	5	0	5	
Spelling	Mistake Identified	0	11	11	25
	Mistake Not Identified	3	11	14	
Grammar & Punctuation	Grammar	17	0	17	26
	Punctuation	9	0	9	

Table 2.2. Structure of Year 5 Test Domains, NAPLAN 2013

Domain	Strand	Number of MC Items	Number of CR Items	Total for Strand	Total in Test
Numeracy	Measurement, Chance and Data	9	3	12	40
	Space	8	4	12	
	Number	10	2	12	
	Algebra, Function and Pattern	2	2	4	
Reading	Text Location and Interpretation	27	0	27	37
	Text and Language Knowledge	3	0	3	
	Contextual Understanding	6	1	7	
Spelling	Mistake Identified	0	12	12	25
	Mistake Not Identified	0	13	13	
Grammar & Punctuation	Grammar	18	0	18	26
	Punctuation	8	0	8	

Table 2.3. Structure of Year 7 Test Domains, NAPLAN 2013

Domain	Strand	Number of MC Items	Number of CR Items	Total for Strand	Total in Test
Numeracy (Non-calculator)	Measurement, Chance and Data	5	4	9	64
	Space	5	2	7	
	Number	9	1	10	
	Algebra, Function and Pattern	4	2	6	
Numeracy (Calculator)	Measurement, Chance and Data	4	4	8	30
	Space	7	1	8	
	Number	6	3	9	
	Algebra, Function and Pattern	6	1	7	
Reading	Text Location and Interpretation	30	0	30	50
	Text and Language Knowledge	12	1	13	
	Contextual Understanding	7	0	7	
Spelling	Mistake Identified	0	16	16	30
	Mistake Not Identified	0	14	14	
Grammar & Punctuation	Grammar	19	0	19	28
	Punctuation	9	0	9	

Table 2.4. Structure of Year 9 Test Domains, NAPLAN 2013

Domain	Strand	Number of MC Items	Number of CR Items	Total for Strand	Total in Test
Numeracy (Non-calculator)	Measurement, Chance and Data	5	3	8	64
	Space	5	2	7	
	Number	5	2	7	
	Algebra, Function and Pattern	7	3	10	
Numeracy (Calculator)	Measurement, Chance and Data	6	2	8	
	Space	4	4	8	
	Number	8	1	9	
	Algebra, Function and Pattern	6	1	7	
Reading	Text Location and Interpretation	31	1	32	49
	Text and Language Knowledge	9	1	10	
	Contextual Understanding	7	0	7	
Spelling	Mistake Identified	0	16	16	30
	Mistake Not Identified	0	14	14	
Grammar & Punctuation	Grammar	20	0	20	28
	Punctuation	8	0	8	

For writing, all students in Years 3, 5, 7 and 9 were required to write a persuasive text in response to the same writing prompt. The scripts were rated based on the same ten criteria (Criteria 1 to 10) across all four year levels. Each of these 10 criteria was rated polytomously. The ratings on the 10 criteria were treated as data on 10 different items each with their own score category. The 10 criteria with the associated number of score categories are listed in Table 2.5.

Table 2.5. Criteria and Score Categories for Writing, Years 3 to 9, NAPLAN 2013

Item	Criterion	Score Categories
1	Audience	0-6
2	Text Structure	0-4
3	Ideas	0-5
4	Persuasive Devices	0-4
5	Vocabulary	0-5
6	Cohesion	0-4
7	Paragraphing	0-3
8	Sentence Structure	0-6
9	Punctuation	0-5
10	Spelling	0-6
Score Range		0-48

CHAPTER 3. SAMPLING DESIGN FOR STAGE-1 ANALYSES

3.1 Overview

As with earlier NAPLAN administrations, sample databases were drawn from states and territories for the purpose of test calibrations and scaling, for equating, and for generating preliminary estimates of key national outcomes to be used on parent reports. This approach enabled results to be delivered to jurisdictions in time for reporting to schools and parents. It also provided jurisdictions with preliminary estimates of the final national outcomes some time before the full census data were made available.

There were three sampling activities associated with the NAPLAN 2013:

- The National Calibration Sample – This was a sample of students who participated in the NAPLAN assessments that was used for generating estimates of the key national outcomes to be used on parent reports, and in placing the 2013 NAPLAN results on the existing NAPLAN scale.
- The Item Calibration Sample – This was a sub-sample of the National Calibration Sample that was used for test calibrations and scaling.
- The Equating Sample – This sample was required to equate the 2013 tests onto the established NAPLAN reporting scales. As in earlier administrations, a common-person equating method was used. Secure equating forms, which had been previously equated onto the NAPLAN reporting scale, were administered to a sample of students in addition to the NAPLAN 2013 tests.

Educational Measurement Solutions (EMS), as a subcontractor to Pearson, worked with documentation from the previous technical vendor (Australian Council for Educational Research (ACER)) and information from the Australian Curriculum, Assessment and Reporting Authority (ACARA) to create the sampling procedures used for the 2013 NAPLAN administration. Documentation for calculating the sampling weights can be found in an ACER report included in Appendix G of the 2012 NAPLAN Technical Report. This appendix provides:

- a description of the source data files that are used to create the sampling weights.
- the steps used for preparing the data.
- the calculation procedure for the sampling weights including adjustments for post-stratification and student-non-response.
- the procedure for checking and assigning weights to the National Calibration Sample file.
- the procedure for calculating the response rates.

Appendix A provides the 2013 NAPLAN EMS report and describes:

- the development of the sample frames for the National Calibration and Equating Samples including the steps used in data preparation and the creation of primary and secondary samples based on grade levels.
- the details of the explicit and implicit stratification used and the selection of schools.
- the procedures employed for using replacement schools when the schools originally selected for the sample did not participate.

The appendix also provides details on the sample frame and sampling parameters used in the 2013 NAPLAN administration.

The remainder of this chapter presents tables describing salient aspects of the National Calibration Sample and the Equating Sample as they were realised during the 2013 administration. These tables include the numbers of schools and students sampled, the assessment participation rates, and the distributions of gender, language background (LBOTE), Indigenous status, and geolocation by year level.

3.2 The National Calibration Sample

Table 3.1 lists the numbers of schools and students included in the National Calibration Sample from each of the eight jurisdictions. The table shows both the numbers of students (N) who were selected in the sample, as well as the numbers of students (Wtd. N) represented by the samples after sampling weights had been applied to approximate the full population of students who had taken the 2013 NAPLAN tests.

Table 3.1. Numbers of Schools and Students included in the National Calibration Sample by State/Territory and Year Level (2013)

		NSW	VIC	QLD	WA	SA	TAS	ACT	NT	Total
Year 3	Schools	48	48	45	42	43	31	20	25	302
	Students (N)	1651	1786	2215	1506	1378	886	941	565	10928
	Students (Wtd. N)	90077	70920	62865	31527	20055	6145	6794	4208	292591
Year 5	Schools	48	48	46	44	43	30	20	25	304
	Students (N)	1622	1724	2089	1456	1307	915	930	607	10650
	Students (Wtd. N)	89527	68188	60004	30632	19952	6321	4779	4518	283921
Year 7	Schools	47	43	46	38	42	28	17	17	278
	Students (N)	5401	5085	2084	1607	1204	2020	2416	647	20464
	Students (Wtd. N)	90504	70344	63642	31212	20560	6889	5282	3599	292033
Year 9	Schools	48	46	47	46	46	29	17	14	293
	Students (N)	5380	5501	6213	5963	4923	2117	2485	533	33115
	Students (Wtd. N)	93620	72220	65755	31969	21774	6855	5412	3633	301239
Total	Students (N)	14054	14096	12601	10532	8812	5938	6772	2352	75157
	Students (Wtd. N)	363728	281673	252266	125340	82342	26210	22268	15958	1169784

The remainder of this section presents summary tables showing school and student participation in the sample and the distribution of the National Calibration Sample across key population subgroups.

Table 3.2 shows the percentages of original eligible sampled schools (i.e., without replacement schools) that were included in the National Calibration Sample for each jurisdiction by year level, and the inclusion rates when replacement schools were taken into account.

For each jurisdiction and year level, the school response rates before the use of replacement schools are calculated as

$$RRs = P_s / (P_s + NP) \quad (3.1)$$

where RR_s is the response rate using sampled schools only, P_s is the number of sampled schools that participated and NP is the number of sampled schools that did not participate.

The school response rate after the use of replacement school is given by

$$RR_{sr} = P_{sr} / (P_{sr} + NP) \quad (3.2)$$

where RR_{sr} is the response rate using sampled schools and replacement schools, P_{sr} is the number of sampled or replacement schools that participated, and NP is the number of sampled schools that did not participate.

Table 3.2. Percentage of Sampled Schools included in the National Calibration Sample (2013)

		NSW	VIC	QLD	WA	SA	TAS	ACT	NT
Year 3	Sampled Schools	100	98	100	95	98	100	100	96
	Sampled and Replaced Schools	100	100	100	100	100	100	100	100
Year 5	Sampled Schools	100	96	100	95	98	100	100	96
	Sampled and Replaced Schools	100	100	100	100	100	100	100	100
Year 7	Sampled Schools	100	84	96	95	98	96	100	100
	Sampled and Replaced Schools	100	88	100	100	100	100	100	100
Year 9	Sampled Schools	98	88	96	100	100	97	100	100
	Sampled and Replaced Schools	100	96	100	100	100	100	100	100

Table 3.3 to Table 3.6 present the overall student participation rates obtained by aggregating students across all of the schools within the National Calibration Sample. These participation rates are reported by state/territory and by domain for each year level. Besides students who were *present* for testing, several other categories are shown and defined as follows:

- *Absent* students are students who did not take the test because they were not present when the test was administered, and are identified as absent by the school for the purpose of the test session (ACARA, 2013a, p. 11);
- Students may be labeled *exempt* from one or more of the tests on the basis of English language proficiency or significant disabilities as attested by parents/carers (ACARA, 2013a, p. 10);
- Students may be *withdrawn* from the testing program by their parent/carer for such reasons as religious beliefs or philosophical objections to testing (ACARA, 2013a, p. 12);
- The *other* category includes sanctioned abandonment of the test due to injury and illness and verified by the Test Administration Authority (TAA).

Table 3.3. Year 3 Sample: Overall Participation Category Rates (%) by State/Territory by Domain (2013)

Domain	Participation Code									
		NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	Absent	1.3	3.1	2.0	3.0	2.6	2.3	1.8	13.8	2.9
	Exempt	1.3	1.7	1.4	0.7	0.7	1.2	1.7	1.2	1.3
	Withdrawn	0.5	1.7	3.3	2.6	3.0	0.5	8.7	0.5	2.6
	Other	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Present	97.0	93.5	93.2	93.8	93.6	95.9	87.8	84.4	93.2
Writing	Absent	1.1	2.9	3.3	2.9	2.9	1.9	1.4	12.6	3.0
	Exempt	1.3	1.7	1.4	0.7	0.7	1.2	1.8	1.2	1.3
	Withdrawn	0.5	1.8	3.0	2.6	3.0	0.5	9.0	0.5	2.6
	Other	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
	Present	97.0	93.6	92.2	93.8	93.4	96.4	87.7	85.7	93.1
Spelling	Absent	1.0	2.9	2.3	2.7	2.5	1.9	1.2	13.3	2.7
	Exempt	1.3	1.7	1.4	0.7	0.7	1.2	1.8	1.2	1.3
	Withdrawn	0.5	1.7	2.9	2.5	3.0	0.5	9.0	0.5	2.5
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	97.2	93.7	93.4	94.2	93.8	96.4	88.0	85.0	93.5
Grammar & Punctuation	Absent	1.0	2.9	2.3	2.7	2.5	1.9	1.2	13.3	2.7
	Exempt	1.3	1.7	1.4	0.7	0.7	1.2	1.8	1.2	1.3
	Withdrawn	0.5	1.7	2.9	2.5	3.0	0.5	9.0	0.5	2.5
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	97.2	93.7	93.4	94.2	93.8	96.4	88.0	85.0	93.5
Numeracy	Absent	1.8	3.8	2.7	2.9	3.3	2.1	2.2	15.4	3.4
	Exempt	1.3	1.7	1.4	0.7	0.7	1.2	1.7	1.2	1.3
	Withdrawn	0.5	1.6	3.2	2.5	2.8	0.5	8.8	0.5	2.5
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	96.4	92.9	92.7	94.0	93.3	96.2	87.2	82.8	92.8

Note: The percentages of students represented in the table above have been rounded and may not sum to 100.

Table 3.4. Year 5 Sample: Overall Participation Category Rates (%) by State/Territory by Domain (2013)

Domain	Participation Code									
		NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	Absent	1.9	2.5	1.3	3.0	1.9	1.4	2.2	16.0	2.8
	Exempt	1.0	1.6	1.2	0.4	1.1	1.5	1.8	1.6	1.2
	Withdrawn	0.8	1.5	2.7	1.0	3.1	0.5	4.2	1.0	1.9
	Other	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0
	Present	96.3	94.5	94.7	95.5	94.0	96.5	91.8	81.2	94.1
Writing	Absent	1.9	2.7	1.8	3.0	2.3	1.1	1.8	14.7	2.9
	Exempt	1.0	1.6	1.2	0.4	1.1	1.5	2.3	1.6	1.3
	Withdrawn	0.7	1.7	2.7	1.0	3.1	0.5	4.2	1.0	1.9
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.0
	Present	96.3	94.1	94.3	95.7	93.5	96.8	91.6	82.5	94.0
Spelling	Absent	1.7	2.4	1.2	2.7	2.0	1.0	1.9	14.5	2.6
	Exempt	1.0	1.5	1.2	0.5	1.1	1.5	2.2	1.6	1.2
	Withdrawn	0.7	1.5	2.7	1.0	3.1	0.5	4.2	1.0	1.9
	Other	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0
	Present	96.5	94.6	94.8	95.7	93.8	96.8	91.7	82.7	94.3
Grammar & Punctuation	Absent	1.7	2.4	1.2	2.7	2.0	1.0	1.9	14.5	2.6
	Exempt	1.0	1.5	1.2	0.5	1.1	1.5	2.2	1.6	1.2
	Withdrawn	0.7	1.5	2.7	1.0	3.1	0.5	4.2	1.0	1.9
	Other	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.0
	Present	96.5	94.6	94.8	95.7	93.8	96.8	91.7	82.7	94.3
Numeracy	Absent	2.3	3.4	1.8	3.7	2.1	3.1	2.8	19.8	3.7
	Exempt	1.0	1.5	1.1	0.4	1.1	1.5	1.9	1.6	1.2
	Withdrawn	0.7	1.5	2.6	1.0	2.8	0.5	4.1	1.0	1.8
	Other	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0
	Present	95.9	93.6	94.5	94.8	94.0	94.9	91.2	77.4	93.3

Notes: The percentages of students represented in the table above have been rounded and may not sum to 100.

Table 3.5. Year 7 Sample: Overall Participation Category Rates (%) by State/Territory by Domain (2013)

Domain	Participation Code									
		NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	Absent	2.2	3.9	2.0	2.6	2.8	4.1	3.6	10.7	3.3
	Exempt	1.3	0.8	1.2	0.8	1.4	0.9	1.1	1.9	1.1
	Withdrawn	0.6	1.2	2.3	0.6	1.5	0.5	3.9	1.5	1.4
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	95.9	94.2	94.5	96.1	94.3	94.5	91.5	85.9	94.3
Writing	Absent	2.1	4.1	2.1	2.6	3.1	3.6	2.5	8.5	3.1
	Exempt	1.3	0.8	1.3	0.8	1.4	0.9	1.1	1.9	1.1
	Withdrawn	0.6	1.2	2.4	0.6	1.6	0.5	3.9	1.5	1.4
	Other	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	Present	96.0	93.9	94.3	95.9	93.9	94.9	92.5	88.1	94.4
Spelling	Absent	2.0	3.9	1.8	2.6	2.7	2.8	2.4	8.2	2.8
	Exempt	1.3	0.8	1.3	0.8	1.4	0.9	1.2	1.9	1.1
	Withdrawn	0.6	1.2	2.3	0.6	1.5	0.5	3.8	1.5	1.4
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
	Present	96.1	94.2	94.6	96.1	94.4	95.7	92.5	88.3	94.7
Grammar & Punctuation	Absent	2.0	3.9	1.8	2.6	2.7	2.8	2.4	8.2	2.8
	Exempt	1.3	0.8	1.3	0.8	1.4	0.9	1.2	1.9	1.1
	Withdrawn	0.6	1.2	2.3	0.6	1.5	0.5	3.8	1.5	1.4
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
	Present	96.1	94.2	94.6	96.1	94.4	95.7	92.5	88.3	94.7
Numeracy (Calculator)	Absent	2.8	4.5	2.6	3.7	3.9	5.2	4.0	11.0	4.0
	Exempt	1.3	0.8	1.2	0.8	1.4	0.9	1.1	2.0	1.1
	Withdrawn	0.6	1.3	2.3	0.6	1.4	0.5	4.0	1.5	1.4
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	95.2	93.5	93.9	95.0	93.3	93.3	90.9	85.5	93.5
Numeracy (Non-calculator)	Absent	2.8	4.6	2.7	3.7	4.0	5.2	4.0	11.1	4.0
	Exempt	1.3	0.8	1.2	0.8	1.4	0.9	1.1	2.0	1.1
	Withdrawn	0.6	1.3	2.3	0.6	1.4	0.5	4.0	1.5	1.4
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	95.2	93.3	93.8	94.9	93.2	93.4	90.9	85.3	93.4

Notes: The percentages of students represented in the table above have been rounded and may not sum to 100.

Table 3.6. Year 9 sample: Overall Participation Category Rates (%) by State/Territory by Domain (2013)

Domain	Participation Code	Participation								
		NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	Absent	4.6	6.5	4.8	6.8	6.9	8.0	6.0	15.0	6.2
	Exempt	1.1	0.6	1.1	0.6	1.0	0.6	0.8	0.9	0.9
	Withdrawn	0.9	1.3	4.1	0.7	2.4	0.5	4.2	0.9	2.0
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	93.3	91.6	90.0	91.8	89.6	90.9	89.1	83.1	90.9
Writing	Absent	4.1	6.0	5.4	6.5	6.3	7.0	5.0	13.5	5.8
	Exempt	1.1	0.6	1.1	0.6	1.0	0.6	0.8	1.1	0.9
	Withdrawn	1.0	1.3	4.0	0.7	2.4	0.5	3.9	0.9	2.0
	Other	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	Present	93.7	92.1	89.4	92.1	90.3	91.8	90.2	84.4	91.3
Spelling	Absent	4.1	6.3	4.5	6.0	6.2	6.4	5.2	13.5	5.6
	Exempt	1.1	0.6	1.1	0.6	1.0	0.6	0.8	1.1	0.9
	Withdrawn	1.0	1.2	4.0	0.7	2.4	0.5	3.9	0.9	1.9
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	93.8	91.9	90.4	92.6	90.4	92.5	90.1	84.4	91.6
Grammar & Punctuation	Absent	4.1	6.3	4.5	6.0	6.2	6.4	5.2	13.5	5.6
	Exempt	1.1	0.6	1.1	0.6	1.0	0.6	0.8	1.1	0.9
	Withdrawn	1.0	1.2	4.0	0.7	2.4	0.5	3.9	0.9	1.9
	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Present	93.8	91.9	90.4	92.6	90.4	92.5	90.1	84.4	91.6
Numeracy (Calculator)	Absent	5.3	7.7	6.3	7.5	8.2	9.2	6.3	16.3	7.2
	Exempt	1.1	0.5	1.0	0.6	1.0	0.6	0.8	0.9	0.8
	Withdrawn	1.0	1.3	4.1	0.7	2.4	0.6	4.1	0.9	2.0
	Other	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	Present	92.5	90.5	88.7	91.1	88.4	89.6	88.8	81.8	89.9
Numeracy (Non-calculator)	Absent	5.3	7.7	6.3	7.6	8.2	9.0	6.3	16.5	7.2
	Exempt	1.1	0.5	0.9	0.6	1.0	0.6	0.8	0.9	0.8
	Withdrawn	1.0	1.3	4.1	0.7	2.4	0.6	4.1	0.9	2.0
	Other	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
	Present	92.5	90.5	88.7	91.0	88.3	89.8	88.8	81.6	89.9

Notes: The percentages of students represented in the table above have been rounded and may not sum to 100.

Table 3.7 to Table 3.10 shows the overall distributions of the National Calibration Sample by several student-level and school-level demographic variables by year level and jurisdiction. The definitions of these variables are taken from the *National Assessment Program – Literacy and Numeracy Achievement in Reading, Persuasive Writing, Language Conventions and Numeracy: National Report for 2013* (ACARA, 2013b):

- *Gender* is the distinction ‘male’ and ‘female’ as reported on a student’s enrolment record (Table 3.7).
- A student is classified as *language background other than English (LBOTE)* if either the student or parents/ guardians speak a language other than English at home (Table 3.8).
- A student is considered to be *Indigenous* if he or she identifies as being of Aboriginal and/or Torres Strait Islander origin. The term ‘origin’ is considered to relate to a person’s Australian Aboriginal or Torres Strait Islander descent and for some, but not all, their cultural identity (Table 3.9).
- The *geolocation* of a school uses the MCEECDYA Schools Geographic Location Classification System which is based on the locality of individual schools and is used to disaggregate data according to Metropolitan, Provincial, Remote and Very Remote (Table 3.10).

Table 3.7. Calibration Sample: Distribution (%) by Gender by Year Level (2013)

Year Level	Gender	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
3	Male	52.8	48.5	49.8	51.5	52.4	54.0	49.3	50.8	51.0
	Female	47.2	51.5	50.2	48.5	47.6	46.0	50.7	49.2	49.0
5	Male	52.2	47.3	51.7	48.9	53.1	52.9	43.7	53.5	50.4
	Female	47.8	52.7	48.3	51.1	46.9	47.1	56.3	46.5	49.6
7	Male	49.6	45.7	49.5	50.5	53.6	49.7	48.8	52.4	48.9
	Female	50.4	54.3	50.5	49.5	46.4	50.3	51.2	47.6	51.1
9	Male	48.5	46.6	51.2	48.7	51.6	48.4	49.3	50.3	49.3
	Female	51.5	53.4	48.8	51.3	48.4	51.6	50.7	49.7	50.7

Notes: The percentages represented in the table above have been rounded and may not sum to 100.

Table 3.8. Calibration Sample: Distribution (%) by Language Background by Year Level (2013)

Year Level	Language Status	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
3	Non-LBOTE	75.4	69.2	91.4	57.2	85.4	91.0	70.5	49.2	75.9
	LBOTE	20.3	30.8	8.6	20.5	13.1	5.8	18.3	47.8	18.8
	Not Stated	4.3	0.0	0.0	22.2	1.5	3.3	11.3	3.0	5.3
5	Non-LBOTE	75.2	71.1	90.1	56.8	85.5	92.9	71.8	44.0	75.7
	LBOTE	20.0	28.9	9.9	22.3	13.5	4.8	20.2	51.9	19.5
	Not Stated	4.8	0.0	0.0	20.9	1.1	2.3	8.0	4.1	4.9
7	Non-LBOTE	62.7	77.0	91.2	63.2	85.4	93.8	77.6	61.2	75.3
	LBOTE	33.3	23.0	8.8	22.1	13.9	4.3	15.4	37.2	21.4
	Not Stated	4.0	0.0	0.0	14.7	0.7	1.9	7.0	1.5	3.3
9	Non-LBOTE	62.5	76.7	90.5	54.0	82.6	95.7	77.3	58.2	74.7
	LBOTE	32.0	23.3	9.5	15.9	16.0	2.6	13.8	37.9	17.9
	Not Stated	5.5	0.0	0.0	30.1	1.3	1.8	8.9	3.9	7.3

Notes: The percentages represented in the table above have been rounded and may not sum to 100.

Table 3.9. Calibration Sample: Distribution (%) by Indigenous Status by Year Level (2013)

Year Level	Indigenous Status	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
3	Aboriginal and/or Torres Strait Islander	4.5	1.7	5.9	6.1	3.6	7.3	2.7	44.2	6.6
	Non-Aboriginal and/or Torres Strait Islander	91.3	98.1	94.1	90.9	94.8	81.3	86.1	54.7	90.2
	Not Stated	4.2	0.2	0.0	3.0	1.6	11.4	11.3	1.1	3.2
5	Aboriginal and/or Torres Strait Islander	4.9	1.2	5.4	6.9	2.4	6.7	1.5	46.3	6.6
	Non-Aboriginal and/or Torres Strait Islander	90.3	98.4	94.6	89.2	96.5	84.4	90.9	52.6	90.5
	Not Stated	4.8	0.3	0.0	3.9	1.1	9.0	7.6	1.2	3.0
7	Aboriginal and/or Torres Strait Islander	4.4	1.6	4.8	5.6	3.6	8.0	1.8	38.3	4.9
	Non-Aboriginal and/or Torres Strait Islander	88.1	98.2	95.2	89.9	95.7	83.6	90.5	60.7	90.9
	Not Stated	7.6	0.1	0.0	4.5	0.7	8.4	7.7	0.9	4.2
9	Aboriginal and/or Torres Strait Islander	4.2	1.5	6.6	6.6	3.7	8.0	1.8	35.8	5.1
	Non-Aboriginal and/or Torres Strait Islander	89.3	98.4	93.4	87.0	94.7	80.5	89.5	63.4	91.0
	Not Stated	6.5	0.1	0.0	6.4	1.6	11.4	8.7	0.8	3.9

Notes: The percentages represented in the table above have been rounded and may not sum to 100.

Table 3.10. Calibration Sample: Distribution (%) by Geolocation by Year Level (2013)

Year Level	Geolocation	NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
3	Metro	72.3	79.0	70.6	75.4	77.2	47.1	100.0	-	70.7
	Provincial	27.5	21.0	26.5	20.5	18.1	50.1	0.0	43.4	24.4
	Remote	0.2	0.0	2.0	4.2	3.8	2.8	-	23.9	3.0
	Very Remote	0.0	-	0.9	0.0	0.9	0.0	-	32.7	2.0
5	Metro	71.5	76.4	71.6	76.1	77.5	48.0	100.0	-	70.1
	Provincial	28.4	23.6	25.4	20.5	19.1	50.3	0.0	40.0	24.9
	Remote	0.2	0.0	1.9	3.4	2.9	1.7	-	23.4	2.7
	Very Remote	0.0	-	1.1	0.0	0.5	0.0	-	36.6	2.4
7	Metro	77.8	76.7	70.3	76.8	75.5	45.9	100.0	-	73.6
	Provincial	22.1	23.3	27.2	19.9	19.8	53.8	-	57.2	24.2
	Remote	0.1	0.0	1.3	3.3	3.9	0.0	-	25.2	1.4
	Very Remote	0.0	-	1.1	0.0	0.8	0.3	-	17.6	0.8
9	Metro	74.8	75.4	65.5	71.2	71.8	45.9	100.0	-	70.9
	Provincial	25.0	24.6	33.5	25.7	25.3	54.0	-	61.2	27.2
	Remote	0.2	0.0	0.6	3.1	1.9	0.0	-	25.1	1.4
	Very Remote	0.0	-	0.4	0.0	1.0	0.1	-	13.7	0.4

Notes: The percentages represented in the table above have been rounded and may not sum to 100.

A '-' indicates that the geolocation does not apply within this state/territory or for this year level.

3.3 The Equating Sample

Table 3.11 shows the achieved number of schools and students in the Equating Sample by content domain, year level, and state/territory.

Table 3.11 Numbers of Schools and Students for the Equating Forms (2013)

Domain	Year Level		NSW	VIC	QLD	WA	SA	TAS	ACT	NT	AUS
Reading	3	School	10	9	6	4	3	1	2	2	37
		Student	254	199	150	109	70	25	48	54	909
	5	School	9	8	6	4	3	1	2	2	35
		Student	239	190	153	112	75	25	46	52	892
	7	School	13	10	6	4	2	2	2	2	41
		Student	324	228	135	103	46	49	50	53	988
	9	School	13	10	8	4	4	2	2	2	45
		Student	321	233	181	107	97	50	50	49	1088
	All	School	45	37	26	16	12	6	8	8	158
		Student	1138	850	619	431	288	149	194	208	3877
Language Conventions (Spelling, Grammar and Punctuation)	3	School	10	8	5	4	3	2	2	2	36
		Student	250	183	115	100	82	49	43	40	862
	5	School	11	8	5	4	3	2	2	2	37
		Student	285	187	126	97	82	50	48	49	924
	7	School	13	10	5	4	3	2	2	2	41
		Student	307	246	125	109	82	51	51	49	1020
	9	School	13	10	8	6	3	2	2	2	46
		Student	292	234	174	162	71	45	51	51	1080
	All	School	47	36	23	18	12	8	8	8	160
		Student	1134	850	540	468	317	195	193	189	3886
Numeracy	3	School	10	7	6	3	3	2	2	2	35
		Student	272	172	150	74	81	52	49	54	904
	5	School	10	7	6	3	3	2	2	2	35
		Student	281	177	159	83	82	48	50	42	922
	7	School	13	10	6	3	3	2	2	2	41
		Student	323	226	156	79	84	56	46	45	1015
	9	School	13	10	8	5	4	2	2	2	46
		Student	305	199	182	112	102	52	59	48	1059
	All	School	46	34	26	14	13	8	8	8	157
		Student	1181	774	647	348	349	208	204	189	3900
All Domains	Total	School	138	107	75	48	37	22	24	24	475
		Student	3453	2474	1806	1247	954	552	591	586	11663

CHAPTER 4. ANALYSIS PROCEDURES AND METHODOLOGY

This chapter describes the processes and methodologies used in the central analysis. The NAPLAN 2013 test calibrations were based on the Item Calibration Sample. The equating to the NAPLAN scale was based on the Equating Sample. The analyses for national reporting used the full cohort data. This process of using responses from a representative sample of students for scale construction, and the full cohort data for national reporting, has been widely utilised in many large scale assessment programs, including the Programme for International Student Assessment (PISA).

4.1 Data Collection and Data Delivery

Data collection was undertaken by the Test Administration Authorities (TAAs) in the jurisdictions. There were three rounds of data delivery. The first round involved delivery of data from the equating samples and the second round involved the delivery of the calibration samples, both described in Chapter 3. The third round involved delivery of nearly complete full cohort NAPLAN test data of Years 3, 5, 7 and 9 students in early August 2013. These data were used for the generation of the National Summary Report. The complete set of full cohort data used in the production of the National Report was delivered in October 2013.

With each round of data delivery, the datasets were cleaned and recoded in preparation for analysis. A systematic process involving data checking was used to ensure that each dataset was consistent with national codeframes and data dictionaries.

4.2 Scaling Model

Test calibration and scaling was performed based on the Rasch model, as was the case in previous administrations.

For multiple-choice items and constructed-response items with a category scored 1 for correct responses and 0 for incorrect responses, the Rasch model predicts the probability of a correct response given the latent trait (θ_n) and the item difficulty or location (δ_i). This is modeled as

$$P_i(1|\theta) = \frac{\exp(\theta_n - \delta_i)}{1 + \exp(\theta_n - \delta_i)} \quad (4.1)$$

where $P_i(1|\theta)$ is the probability of person n to score 1 on item i . θ_n is the estimated latent trait of person n , and δ_i the estimated location of item i on this dimension. For each item, responses are modeled as a function of the latent trait θ_n .

In the case of the writing criteria that are scored using more than two categories, this model can be generalised to the so-called Partial Credit model as

$$P_i(x|\theta) = \frac{\exp \sum_{j=0}^x (\theta_n - \delta_i + \tau_{ij})}{\sum_{h=0}^{m_i} \exp \sum_{j=0}^h (\theta_n - \delta_i + \tau_{ij})} \quad x = 0, 1, \dots, m_i \quad (4.2)$$

where $P_i(x|\theta)$ is the probability of person n to score x on item i . θ_n denotes the person's latent trait, the item parameter δ_i gives the location of the item on the latent continuum, and τ_{ij} is a threshold parameter.

It should be noted that both item (difficulty) and person (ability) parameters are measured on the same scale: in the case of dichotomous items (θ_n) with just two categories (correct and incorrect), for students who have the same ability as the estimated difficulty parameter of an item (δ_i), the probability of giving a correct response is 0.5.

Software used for analyses

For data checking and data analysis the statistical software packages SPSS and SAS were used. For the Rasch scaling analysis, the software *ACER ConQuest* (Wu, Adams and Wilson, 1997) was used. *ACER ConQuest* provides tools for the estimation of a variety of item response models and regression models. It was used for test calibrations, for generating weighted likelihood estimates (WLE) for the score-equivalence tables and for drawing plausible values based on a multidimensional item response model with latent regression. In addition, *RUMM2030's* (Andrich, Sheridan and Luo, 2011) person and item estimates, obtained through independent data recoding and calibration, were compared with the results from *ACER ConQuest* to confirm the accuracy of the calibration results.

4.3 Stage One Analyses Based on Item Calibration Sample and Equating Samples

Sequence of analyses

Analyses were undertaken in the following order:

- Item and test analyses based on item calibration sample data (treating 'not reached' items as 'not administered' to obtain appropriate estimates of item difficulty). No weights were used.
- A check of item characteristics using classical statistics such as item facilities (p -values) and distractor analysis, a check of test characteristics using descriptive statistics and frequency distributions, and differential item functioning (DIF) analysis.
- Horizontal equating using the equating data.
- Vertical equating based on common items in tests of adjacent year levels (Year 3 and Year 5, Year 5 and Year 7, Year 7 and Year 9).
- The combination of results from the horizontal and vertical equatings to construct the NAPLAN 2013 domain scales.
- The generation of student weighted likelihood estimates (WLE) to obtain score equivalence tables.
- The transformation of logit scores into NAPLAN reporting scale scores.
- The analysis to obtain preliminary results based on the calibration sample data (i.e., the full set data from which the item calibration sample was a sub-

sample). Student weights were used in the calculations of preliminary statistics.

- The calculation of standard errors for student summary statistics that took into account sampling, measurement, and equating errors.

Item coding

The recoding of test data was done prior to data analysis.

Data for multiple-choice items were indicated by the letter of the chosen response option for each item, i.e., A, B, C, D, or E. Responses for students not participating on a particular test were recoded to 7s and treated as missing. Multiple responses (8s) were treated as incorrect. Embedded missing responses were coded as 9 by the TAAs and treated as incorrect. Trailing missing responses were also coded as 9 for the first unanswered item and treated as incorrect, while the remaining trailing missing items were recoded as Ms and treated as “not reached”. These not-reached items were treated as missing values for item calibration to obtain an appropriate estimate of the item difficulty (for students who had a chance to respond). However, these omits were treated as incorrect for the final estimation of student abilities.

Data for partial-credit items were indicated by ordered categories starting with 0 up to the maximum possible value. Short-answer items were given scores of 0 or 1. The rules for data recoding are provided in Table 5.1 in the next chapter.

Item calibration

The outcomes of the Rasch analyses, including item and test characteristics, are provided in Chapter 5 and Appendices B and C. The goodness of fit for individual items was based on the Mean Square Statistics. The statistical information regarding item characteristics provided includes:

- Item facility, expressed as percentage correct for each relevant year level.
- Item location on individual year level scales.
- Test targeting and item spread.
- Information about the fit of the item to the Rasch model specified.
- Plots for assessing potential differential item functioning (DIF).
- Information on the consistency of the functioning of link items between adjacent year levels.

Review of test and item characteristics

ACER ConQuest provides statistics for each individual item in tabular form with statistics for response categories. The information provided includes the number of students taking the test item, item discrimination (which is equivalent to the correlation between the correct item category and the corrected total score), the item difficulty parameter and the weighted mean square (Infit) fit statistic. Other information provided in the tables includes scoring for each category (responses and other codes, such as missing or not reached), the number and percentage of students in each category, the point biserials for each category (correlation with the corrected total score) and their *t*-values, as well as the average ability estimates of students in each category and their standard deviation. These statistics were used for item review in conjunction with the item characteristic curves (ICC), which show the modelled and empirical curves and distractor behaviours for multiple-choice items. Distractor curves were studied for problem items. This process is described in greater detail in Chapter 5.

In the calibration for each test, the item difficulties and the distribution of student abilities were presented on the same scale. These can be examined visually in the item variable maps provided by *ACER ConQuest*. The reliabilities of the NAPLAN 2013 tests are reported in Chapter 5.

Differential Item Functioning Analysis

Differential item functioning (DIF) occurs when an item is substantially harder for one group than for another group after the overall differences in knowledge of the subject tested are taken into account.

A general problem of DIF analysis is to determine the point below which differences are not significant. With large sample sizes, most of the differences will appear to be statistically significant but may not be of practical importance or substantial in size. Under such circumstance, rules of thumb were used to determine whether there was substantial DIF present for a particular subgroup.

DIF in the test items was examined for gender, LBOTE and Indigenous groupings. With five domains and four year levels for each of the three subgroup pairs (for writing, four year levels were analysed together), a decision was made to first examine DIF in the subgroups using scatter plots of adjusted item parameters. Separate Rasch calibrations were performed over the same set of items for the subgroups. The mean item difficulty in each of the two independent sets of item parameters was centred at zero. One set of item parameters was then plotted against the other set of item parameters. Each item is represented by one point on the plot. A diagonal line was plotted as the reference line. If the relative item difficulty for an item is the same in the two groups after taking their relative performance on the test into account, the point representing the item will be on the diagonal. The further the distance that point is from the diagonal, the larger will be the size of the DIF.

DIF was also examined using *ACER ConQuest* by analysing the data based on a multi-facet model by adding an item-by-subgroup term.

In addition to the DIF analysis of student subgroups, item differential functioning across jurisdictions was also examined. The results are shown in section 5.6.

Vertical reporting scales

A vertical reporting scale was constructed for each of the five domains spanning Years 3, 5, 7 and 9. Each of the scales was equated onto the NAPLAN scales. The scales were used by jurisdictions to report to parents and schools and for national reporting of student performance on the NAPLAN tests.

Reading, Spelling, Grammar and Punctuation, and Numeracy

Each of the reading, spelling, grammar and punctuation, and numeracy vertical scales across Years 3, 5, 7 and 9 was constructed and equated to the NAPLAN vertical scale established in 2008. The equating was performed through: horizontal test equating based on the equating sample data; and vertical equating using linking items embedded in the 2013 tests of adjacent year levels (Year 3 and Year 5, Year 5 and Year 7, Year 7 and Year 9), based on the 2013 calibration sample data. Specifically, the transformation needed for each domain score was calculated based on the equating constants determined from the horizontal and vertical equating in combination. The methodology and results of the equating are described in Chapter 6, and scale transformations are described in Chapter 7.

Writing

All students in Years 3, 5, 7 and 9 wrote a persuasive piece in response to the same prompt. The persuasive writing scripts were rated according to the same ten criteria used for the scripts in NAPLAN 2011 and 2012. The data from all four year levels were analysed concurrently to construct the vertical writing scale. The writing analysis was based on the Partial Credit model, a polytomous extension of the Rasch model. The equating of the 2013 persuasive writing scale to the 2011 persuasive writing scale was conducted using the pairwise-comparison method. The details of this method are shown in section 6.5. The results were checked against those from the common-item equating method. The results of the equating are discussed in Chapter 6.

Scoring

The raw scores for each student on the five domains were calculated. Omitted responses were scored as being incorrect. Score-equivalence tables based on weighted likelihood estimates (WLE) in logits were generated for each test in each domain based on delta-centred item parameters. Transformations were applied to the logit scores for conversion to NAPLAN reporting scale scores on the established NAPLAN scales.

The jurisdictions were provided with the transformed score-equivalence tables for rapid generation of student and school reports. The score-equivalence tables provided the means for Test Administration Authorities to locate individual students on year level specific reports using the raw scores for each test.

For the estimation of population statistics, rather than using the WLE estimates, five sets of plausible values of student latent proficiency estimates were drawn using *ACER ConQuest* based on imputation techniques and a multidimensional item response model with latent regression for students in each of the year levels for each of reading, spelling, grammar and punctuation, and numeracy. The conditioning variables used were gender, LBOTE status, Indigenous status, school sector, geolocation, parents' education and occupation, and school WLE reading mean. For the calibration sample, jurisdiction was also included as a conditioning variable. The plausible values for writing were drawn for Years 3, 5, 7 and 9 concurrently, conditioning on year level, and the school WLE writing mean was used in the conditioning instead of the reading mean. For each student, the school mean was calculated excluding that particular student. The conditioning on background variables increases the precision of population estimates and allow the analysis of relationships between proficiency estimates and background variables. Plausible values were drawn for all students (including absent students and withdrawn students) except for students who were exempt from NAPLAN testing.

National NAPLAN Reporting Scales and Proficiency Bands

A linear transformation was applied to the logit scores in each domain. The transformation for each domain score was based on standardisation procedures established in 2008 and the equating constants and scale factors estimated from the horizontal and vertical equating, with the result that all five domain scales were put on the NAPLAN historical scales. These scales share the same set of cut-points separating the bands. The cut-points established for NAPLAN 2008 were used in 2009 through 2013 to ensure comparability of results across time.

Preliminary performance information based on the calibration sample

For reporting to parents, the national means, standard deviations, the 20th percentiles and the 80th percentiles for each domain and each year level were calculated using the 2013 calibration sample, with weights applied. Preliminary percentages in bands were also estimated for each domain and each year level. All the statistics obtained were expressed on the NAPLAN Reporting Scales and their respective standard errors (which included sampling, measurement, and equating error) were calculated. The multiple sets of plausible values were used to obtain an estimation of measurement error. Estimates of sampling and measurement error were combined to obtain final standard errors for the performance statistics reported for the sample.

4.4 Stage Two Analyses Based on Census Data

Using item parameters and scaling information as described in the stage one analyses, five sets of plausible values were drawn for each jurisdiction, based on a multidimensional item response model with conditioning on background variables for students in each of the year levels in each of the domains. The conditioning variables used were as described in section 4.3. Census data were analysed to produce national and jurisdiction results, on the full cohort and on subgroups, for national reporting.

4.5 Estimation of Standard Errors

The estimation of standard errors for sample data

The NAPLAN student calibration samples were obtained through a random selection of schools: at the first stage, schools in each jurisdiction were sampled from a sampling frame (stratified by sector) with equal probability; at the second stage, all students from the sampled schools were selected into the sample. By using a cluster sampling technique, these samples are not simple random samples and the usual formulae to obtain standard errors for population estimates are not appropriate.

In general, secondary analyses with plausible values can be described as follows. If θ is the population statistic and θ_i is the statistic of interest computed on one set of plausible values, then:

$$\theta = \frac{1}{M} \sum_{i=1}^M \theta_i \quad (4.3)$$

with M being the number of plausible values.

The plausible values also allow the computation of the uncertainty in the estimate of θ due to the lack of precision of the test. If a perfect test could be developed, then the measurement error would be equal to zero and the M sets of statistics from the plausible values would be identical. Since no test is perfect, the M sets of statistics would not be identical. The *measurement variance* (also called the *imputation variance*) is equal to:

$$B_M = \frac{1}{M-1} \sum_{i=1}^M (\theta_i - \theta)^2 \quad (4.4)$$

It corresponds to the variance of the M plausible value statistics of interest. The final stage is to combine the sampling variance and the measurement variance to get the final variance V as follows:

$$V = U + \left(1 + \frac{1}{M}\right)B_M \quad (4.5)$$

with U being the *sampling variance* (the estimation of which is described below).

When combining the estimates of sampling and measurement error, the statistics have to be computed with full sample weight for each plausible value. To achieve this, SAS macros were used to analyse the five sets of plausible values with properly weighted statistics.

The estimation of standard errors for census data

NAPLAN results from census data were reported with standard errors that included both sampling and measurement errors. The inclusion of sampling error might be considered surprising in that all students in the target year levels were included in the assessment. However, the aim of NAPLAN is to make inference about the educational systems each year and not about the specific student cohorts in 2013. In addition, even in census assessments there is a certain amount of non-response that must be taken into account.

Sampling error was considered at both the student and the school level. At the student level there is a random element from one year to another in respect of having different age cohorts at each year level. At the school level it needs to be considered that schools may be closed from one year to another or new schools may be opened.

However, as Levy and Lemeshow (1999) state

In complex sample surveys, estimation of the variances of estimated population characteristics can be difficult either because of the way the sample was taken or because of the way the estimates of population characteristics were constructed. ... In such situations, the technique of linearization can be used to construct an approximation to the functional form of the estimated population characteristic that is a linear function of the original observations and hence is amenable to construction of a variance estimator. (p. 366)

This process of *linearization* or *Taylor series variance estimation* involves several steps. To look at a simple case, consider a population characteristic θ and assume that there exists an estimator $\hat{\theta} = f(x, y)$ such that the variables x and y are linear functions of the sample observations but that $f(x, y)$ is *not* a linear function of the sample observations. The next step is to use a first-order Taylor series to approximate $f(x, y)$. This results in an approximation that is linear in the variables x and y , and hence, linear in the sample observations. The final step is to take this linear approximation, identify the sample design, and apply the design-based formula to estimate the variance (Levy & Lemeshow, 1999).

Taylor series variance estimation can be done using commercially available statistical software, and in the case of NAPLAN 2013, was implemented using the procedure PROC SURVEYMEANS in the SAS software package. SAS macros were written to combine the estimates of sampling error with the estimates of measurement error in the same way as was done for the sample data, and to obtain final standard errors for the performance statistics

reported for the census data. The standard errors were used to determine statistical significance of differences in NAPLAN 2013 performance in the reports.

Two additional sets of standard errors were calculated, one set for the comparisons across 2008 (the baseline year) and 2013, and one set for the comparisons across 2012 and 2013. These took into consideration, in addition to sampling and measurement errors, the errors due to the equating of measurement scales across 2008, 2012 and 2013. See section 6.8 for a discussion of the estimation procedure used to calculate the standard errors of equating.

4.6 Calculation of Effect Size for Census Data

All significance testing is accompanied by an effect size measure, which indicates the magnitude of any change. Two effect size measures were used.

The effect size for differences in means is given by *Hedge's g*, whose formula is:

$$g = \frac{m_2 - m_1}{s_p} \quad (4.6)$$

where m_1 is the sample mean of the first group, m_2 is the sample mean of the second group, and s_p is the pooled standard deviation, i.e. the square root of the pooled within-groups variance, weighted by the number of cases in each group:

$$s_p = \sqrt{\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}} \quad (4.7)$$

where n_1 and n_2 are the number of cases in groups 1 and 2, respectively, and s_1^2 and s_2^2 are their variances. This formula is known to yield a biased estimate for the population value and is corrected using the following formula:

$$g_{unbiased} = g_{biased} \left[1 - \frac{3}{4(n_1 + n_2 - 2)} \right] \quad (4.8)$$

The effect size for the differences in proportions is given by *Cox's d*, which is calculated by dividing the log odds ratio by 1.65:

$$OR = \frac{p_E q_C}{q_E p_C} \quad (4.9)$$

$$d_{Cox} = \frac{L(OR)}{1.65} \quad (4.10)$$

where p_E is the proportion of students achieving at or above the national minimum standard in the first group, q_E is the proportion of students achieving below the national minimum standard in the first group, p_C is the proportion of students achieving at or above the national minimum standard in the second group and q_C is the proportion of students achieving below the national minimum standard in the second group.

Comparisons of proportions are only included in the NAPLAN National Report.

CHAPTER 5. TEST CALIBRATIONS

This chapter describes the data preparation process, test calibration outcomes, and differential item functioning (DIF) analysis outcomes.

5.1 Data Preparation

As in previous years, each TAA prepared its jurisdiction data according to a common codebook provided. Each TAA prepared four data files in ASCII format, one for each year level. The data files were uploaded to ACARA's secure FTP site. The data were identified at the school level and delivered with school information necessary for the calculation of weights. This made it possible for the data analysis contractor to calculate the weights for each school and for each jurisdiction. The calibration sample data and student weights were then verified by an independent auditor.

Data Checking

All data files were checked for invalid codes and inconsistencies. Data were cleaned and recoded at UWA using specifically designed software. Any concerns about data were communicated to the TAA and rectified as necessary. Recoded data files were generated and verified in preparation for data analysis.

Rules for Data Recoding

Table 5.1 lists the test participation codes used in the data files and the rules for recoding the response string for each test.

Table 5.1. Rules for Data Recoding

Participation Code	Data Recoding Rule
P – Present	Data string (i.e. item responses) expected. Any embedded missing responses are indicated with 9s by the TAA, invalid responses with 8s. The first trailing-missing is to be kept as a 9; subsequent trailing-missings are unreached-missings, and are to be recoded as M. Any embedded-missing responses within the data string are kept as 9s. Students who are present but do not attempt any question will have a string of Ms.
A – Absent	A data string of all 9s for that test was expected from the TAA. Item data are recoded as a string of 7s.
S – Sanctioned Abandonment	This is specifically used to indicate students who unexpectedly abandon the test due to illness or injury. (Indicated as Partial Completion in 2008) There may be data, but these students will be treated as absent. All item data are recoded as a string of 7s.
W – Withdrawn	A data string of all 9s for that test was expected from the TAA. See National protocols for Test Administration section 1.6, 1.7. These students are treated as absent. Item data are recoded as a string of 7s.
E – Exempt	A data string of all 9s for that test was expected from the TAA. See National protocols for Test Administration section 1.2, 1.3 These students are not included in the calibration or in the calculation of means. Item data are recoded as a string of 7s.

A student in Year 7 or Year 9 who was absent or withdrawn for one of the two numeracy tests (calculator-allowed form and non-calculator form) was treated as an absent student only for that particular test. Item data in the absent test were coded as a string of 7s. In recoding

unreached-missing, the two numeracy forms were treated separately. For students who were present for only one of the forms, their numeracy performance was based on only that form.

Language conventions was one test but reported as two domains. There were students who attempted only the spelling part or only the grammar and punctuation part. For the purpose of calibration, the unreached-missing coding was done separately for spelling and grammar and punctuation. A code of 9 was only used for the first of the unreached missing, and the remaining missing values were recoded to M. The code of 9 was also used for embedded missing responses.

Missing data were not expected for writing. Students who were present but did not write anything (blank booklet) had their ratings coded as a string of 9s by the TAAs. These were then all recoded to M.

5.2 Test Calibrations

The reading, spelling, grammar and punctuation, and numeracy tests were calibrated separately by domain and year level, resulting in 16 separate calibrations. In the estimation of parameters, all responses from a non-participating student (absent, withdrawn and exempt) were treated as missing, and embedded-missing (9), the first trailing missing (9) and invalid response (8) were treated as wrong. Trailing missing beyond the first (M) were treated as missing. Senate weights were not used for item calibration. To ensure each state/territory was equally represented, a simple random sample was drawn from each state/territory's calibration sample to match the sample size of the smallest state/territory (Northern Territory).

As explained earlier, students across Years 3, 5, 7 and 9 responded to the same prompt for the writing assessment and the resulting scripts were rated using the same marking rubric based on the ten criteria. As a result, the writing test from Years 3, 5, 7 and 9 were analysed concurrently, based on the partial credit model. The latent distribution was conditioned on year level.

All calibrations were conducted using *ACER ConQuest*. In addition, calibrations were conducted independently using *RUMM2030* as a method of checking the accuracy of the calibration process.

In Appendix B are the *ACER ConQuest* item analysis results. This is an item-by-item tabular display of classical item statistics: item facility, discrimination and point-biserial statistics, counts and percentages of each response option (for multiple-choice items), score-points (for scored items), and Rasch item parameters and Infit mean square. The item parameters shown on these tables are delta-centred (i.e., mean of item difficulties set to zero) within each domain and year level, except for writing, where Years 3, 5, 7 and 9 are combined. Traditional test reliability, Coefficient Alpha, is presented at the end of the item analysis results for each test.

The Rasch item parameter estimates and statistics are summarised in Appendix C for each of the 17 tests. The item parameters shown in these tables are delta-centred for each test. The 95% confidence interval for the expected value of the Infit mean square is also provided for each item.

Item Characteristic Curves (ICCs) for all items are shown in Appendix D. The ICC plot shows a comparison of the empirical ICC based on observations from ten equal-size ability groupings (broken line joining 10 dots) and the expected model-based ICC (smooth line). The two curves should display small or no disparities for an item that has good fit to the model. Since the ICC for a multiple-choice item also shows the proportion of students in each of the 10 groups who responded to each distractor in the distractor response curves, the performance of distractors can be examined using the item analysis results and the behaviours of the response curves in the ICC plots.

5.3 Test Reliability and Average Item Discrimination

Test Reliability

Table 5.2 shows the coefficient alpha of each test. It should be noted that the language conventions test is reported as two domains for each year level: spelling, and grammar and punctuation with 23-30 items each. While spelling items are of constructed response format, grammar and punctuation items are of multiple-choice format.

The coefficient alphas are between 0.87 and 0.89 for the reading tests, between 0.91 and 0.92 for the spelling tests, between 0.77 and 0.81 for the grammar and punctuation tests, and between 0.86 and 0.93 for the numeracy tests. The reliability for the writing test is 0.96. The reliabilities are generally high with the exception of the reliabilities for the grammar and punctuation tests. The shorter multiple-choice tests may explain the slightly lower reliability for the grammar and punctuation tests.

Table 5.2. Coefficient Alpha for NAPLAN 2013 Tests

Year Level	Reading	Spelling	Grammar and Punctuation	Numeracy	Writing
3	0.87	0.92	0.77	0.86	
5	0.88	0.92	0.81	0.88	
7	0.87	0.92	0.79	0.92	0.96*
9	0.89	0.91	0.79	0.93	

*For all grades

Average Item Discrimination

Table 5.3 shows the average item discriminations for the reading, spelling, grammar and punctuation, and numeracy tests. The average item discriminations for the reading tests range from 0.38 to 0.44, with the Year 7 test having the lowest average item discrimination. The spelling tests have the highest average item discriminations, ranging from 0.54 to 0.60. The averages for the grammar and punctuation tests are between 0.39 and 0.43, and those for the numeracy tests are between 0.42 and 0.44. The average item discriminations are also shown separately for the non-calculator (NC) and calculator (C) forms for Year 7 and Year 9 tests. These average item discrimination indices are considered high.

The unusually high average item discrimination (i.e., 0.86) for the writing test is likely due to the small number of highly correlated, polytomously scored criteria used in scoring across the span of grade levels.

Table 5.3. Average Item Discrimination for NAPLAN 2013 Tests

Year Level	Reading	Spelling	Grammar and Punctuation	Numeracy (All)	Numeracy (NC)	Numeracy (C)	Writing
3	0.44	0.60	0.40	0.42			
5	0.44	0.60	0.43	0.42			
7	0.38	0.56	0.40	0.42	0.42	0.42	0.86*
9	0.40	0.54	0.39	0.44	0.45	0.44	

*For all grades

5.4 Test Targeting and Item Spread

The purpose of the Wright map (or variable map) is to compare the locations of the students (on the left side of the map) and the item thresholds (on the right side of the map). Item, step, and person parameters are most efficiently and meaningfully displayed in a Wright map which plots the parameters on their common scale (Bond & Fox, 2001). Appendix E provides the Wright maps for the domains and year levels.

For dichotomously scored tests, the maps are constructed so that a student has a 50% chance of answering an item correctly when the item is at a difficulty level that is at the same level as the student's ability. On each variable map, the mean of the item estimates was centred at zero. Students at the top end of the distribution have higher proficiency estimates, while items at the top end are the more difficult items.

Figure 5.1 displays the Wright map for Year 3 numeracy. That Wright map indicates that this sample's numeracy achievement level has been well targeted by the current test. The distribution of persons (each X represents approximately seven persons) matches up well with the distribution of item thresholds, which indicates that the ability levels of the population were well represented at all levels of the test.

For the polytomously scored tests (e.g., writing), on the other hand, the criterion difficulty of each of the ten rating criteria is plotted in the middle panel with the latent ability distribution on the left-hand side. Each criterion is polytomously scored. The right-hand panel of Figure E.5 shows locations of the Thurstonian thresholds of each item. The notation $a.b$ indicates threshold b of criterion a . The location of the threshold indicates the ability level required for a student to have 50% chance of achieving category b or better on criterion a . The variable maps show that the thresholds are well-spread out and well-separated.

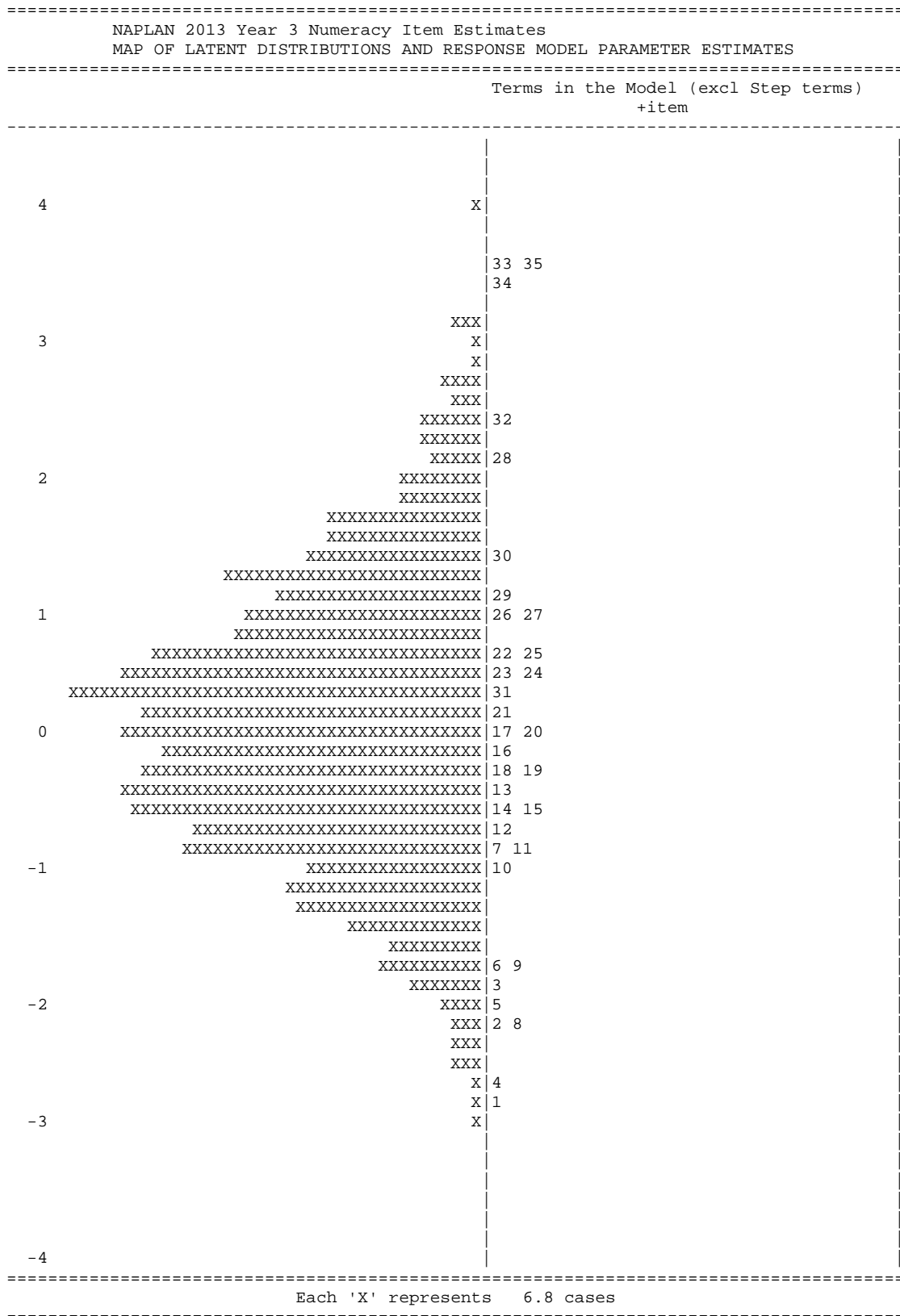


Figure 5.1. Example of a Wright map for Year 3 numeracy.

5.5 Item Fit

The evaluation of goodness of fit to the Rasch model for individual items was based on the weighted mean square (i.e., Infit mean square) statistics. Infit compares the actual residuals to how much of the variation is expected if the data fit the model (Wilson, 2005). A value greater than the expected value of 1.0 indicates that the item responses contain a greater amount of variability than expected by the model, and a value below 1.0 indicates that the consistency between observed data and model-based predictions is better than expected. We used an Infit value of 1.20 as the criterion value for evaluating the goodness of fit of each item, i.e., Infit values greater than 1.20 indicate item under-fit. We also calculated classical item statistics (i.e., discrimination and facility) for the purpose of item fit evaluation, specifying criterion values for discrimination (i.e., item-total score correlation) less than 0.25 and facility outside the range of 0.10 to 0.90. Values of the Infit mean square and classical item statistics of each item can be found in Appendices B and C.

As mentioned in section 5.2., the ICC of each item shows a comparison of the empirical ICC based on observations from ten equal-size ability groupings (broken line joining 10 dots) and the expected model-based ICC (smooth line), and the two curves should display small or no disparities for an item that has good fit to the model. The ICCs for all items can be found in Appendix D.

Reading, Spelling, Grammar and Punctuation, and Numeracy

Item fit to the Rasch model was closely examined for reading, spelling, grammar and punctuation, and numeracy at each of the four year levels. As all items were trialed and examined previously, few items should show misfit. Because of the large size of the calibration sample, the confidence intervals for the Infit mean squares were rather narrow.

Table 5.4 presents the number of items falling in two Infit mean square ranges: less than or equal to 1.20, and greater than 1.20. It also presents the number of items with discrimination less than 0.25 and the number of items with facility outside the range of 0.10 to 0.90. As seen from the table, most of the items have Infit less than or equal to 1.20: there was a total of 13 items across the 16 tests with Infit statistics greater than 1.20 with most of these items appearing on the numeracy tests at Years 7 and 9. Regarding classical test statistics, there was a total of 22 items across the 16 tests with discrimination less than 0.25. While there was a total of 24 items with facility higher than 0.90 (mainly in the grammar and punctuation domain), there was a total of 14 items with facility less than 0.10 (mainly in numeracy). Figure 5.2 shows the ICC of one grammar and punctuation item (i.e., Item lc3q35) with an Infit statistic close to 1.00. In contrast, Figure 5.3 shows the ICC of one numeracy item (i.e., Item n9CAq16) with an Infit statistic (i.e., 1.29) higher than the criterion value (i.e., 1.20) for evaluating the goodness of fit of each item.

Writing

The evaluation of goodness of fit to the Rasch model for individual writing items was also based on the weighted mean square statistics. None of the criteria exhibited misfit to the Rasch partial credit model except for punctuation, and spelling (i.e., 1.43 and 1.23, respectively). Regarding the ICCs, there were not large differences between the empirical and the expected curves for each of the 10 criteria. The ICCs of the 10 writing criteria are also included in Appendix D.

Table 5.4. Summary of Item Statistics in NAPLAN 2013 Tests

Domain	Year	Total Number of Items	Number of Items with Discrimination < 0.25	Number of Items with		Number of Items with	
				Infit ≤ 1.20	Infit > 1.20	Facility > 0.90	Facility < 0.10
Reading	3	36	2	34	2	1	0
	5	37	0	36	1	2	0
	7	50	8	50	0	2	0
	9	49	3	48	1	1	1
Spelling	3	25	0	25	0	1	1
	5	25	0	25	0	1	0
	7	30	0	30	0	0	0
	9	30	0	28	2	0	0
Grammar and Punctuation	3	26	1	26	0	2	0
	5	26	0	26	0	2	0
	7	28	1	28	0	3	0
	9	28	1	28	0	3	0
Numeracy	3	35	2	34	1	2	3
	5	40	0	40	0	1	2
	7	64	3	62	2	2	3
	9	64	1	60	4	1	4

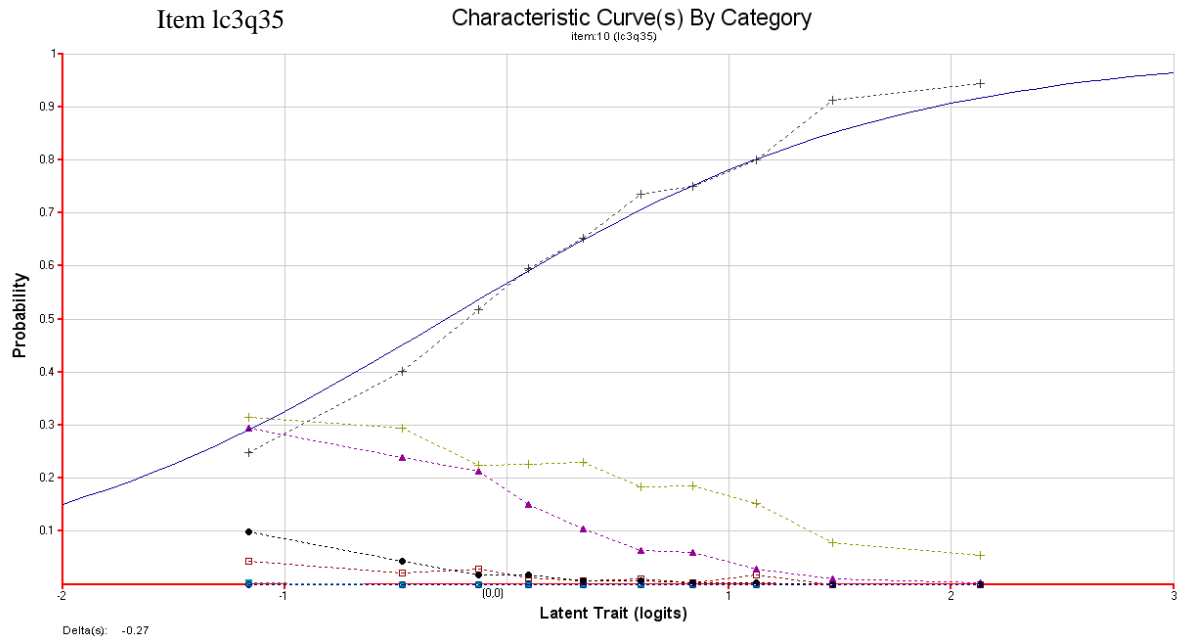


Figure 5.2. Item characteristic curves for an item with Infit = 0.95

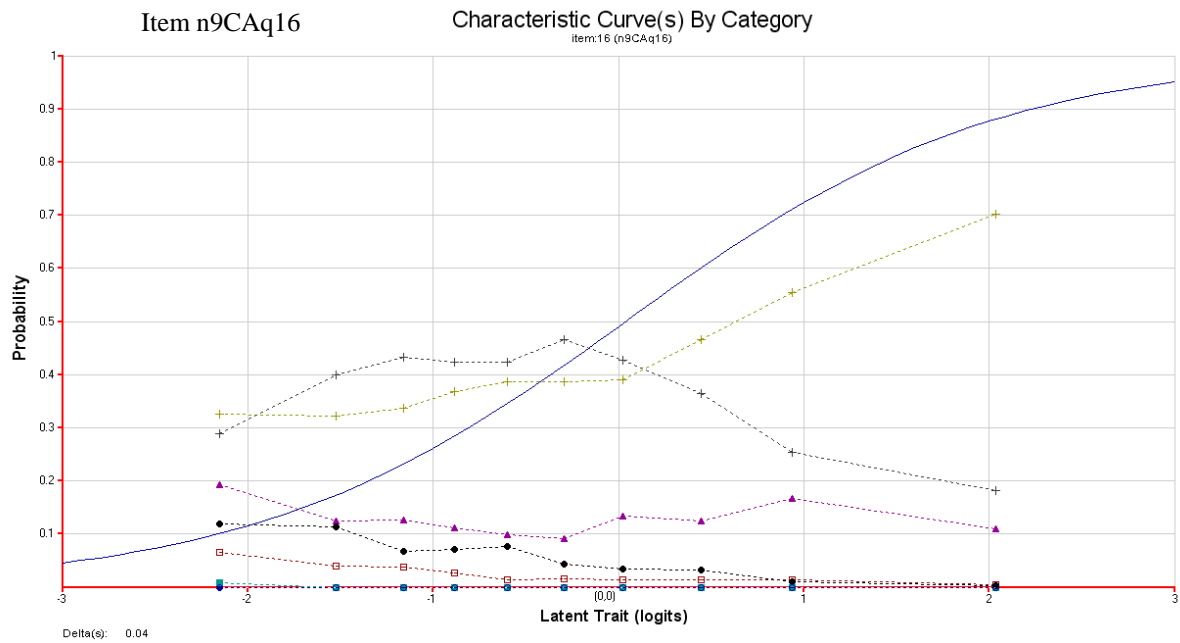


Figure 5.3. Item characteristic curves for an item with Infit > 1.20.

5.6 Differential Item Functioning (DIF) Analyses

According to Camilli and Shepard (1994), item response theory can be used to assess DIF. Specifically,

[i]tem characteristic curves provide a means for comparing the responses of two different groups . . . to the same item. A difference between the ICCs of two groups indicates that . . . examinees [for the two groups] at the same ability level do not have the same probability of success on the item. More technically, DIF is said to occur whenever the conditional probability, $P(\theta)$, of a correct response differs for two groups. (Camilli & Shepard, 1994)

In the analysis for NAPLAN, subgroups were arbitrarily categorized as either reference or focal groups. While males, non-LBOTE students, and non-Indigenous students were assigned to the reference group, females, LBOTE students, and Indigenous students were assigned to the focal group for DIF analyses. As mentioned in Chapter 4, independent Rasch analyses were then performed over the same set of items for each subgroup in order to examine any DIF that exists between two subgroups (e.g., males vs. females). The mean item difficulty for each subgroup was centred at zero to adjust for group differences in ability. The difference in the relative item difficulties after adjustment is referred to as the adjusted difference.

For visual depiction of DIF, item locations of the reference group were plotted against those of the focal group as seen from Appendices F, G and H (i.e., gender, LBOTE, and Indigenous status, respectively). Each item is represented by one point on the plot. A diagonal line is plotted as the reference line. If the relative item difficulty for an item is not different in the two groups after taking their relative performance on the test into account, the point representing the item will be on the reference line. The distance of a point from the diagonal reflects the magnitude of DIF. Due to the large sample sizes, confidence bands were very narrow and were not plotted on the charts.

Finally, Tables 5.5, 5.6, and 5.7 summarize the total number of items indicating potential DIF with an absolute adjusted difference of 0.50 or greater for gender and language background (LBOTE), and 0.60 or greater for Indigenous DIF. Figures 5.3, 5.4, and 5.5 are examples of the potential DIF items. DIF values of individual items for gender, LBOTE, and Indigenous status are presented in Appendix I.

Gender DIF

Appendix F presents the scatter plots for examining gender DIF in the five domains by the four year levels except for the writing test. Writing gender DIF was performed by combining all four grades. On the whole, the plots indicate that there are few items that exhibit gender differences in the adjusted item estimates and that any differences are not large and thus were not of great concern.

Table 5.5 identifies the number of items that show potential gender DIF with an absolute adjusted difference of 0.50 or greater, and Figure 5.3, for example, shows one numeracy item (Item n9CAq03) with an absolute adjusted difference of 0.50 or greater. An item with a positive adjusted difference indicates that the item was relatively easier (i.e. 0.75) for female students. Appendix F includes DIF plots that show for each of the items the observed curves by gender group compared to the expected ICC.

LBOTE DIF

Appendix G shows scatter plots for examining DIF due to language background in the five domains by the four year levels. Writing LBOTE DIF was performed by combining all four grades. These plots indicated that there were not many items that showed notable differences in the relative item difficulties.

Table 5.6 indicates a total of items that show potential DIF with an absolute adjusted difference of 0.50 or greater. Figure 5.4 depicts one spelling item (Item lc5q09) with an absolute adjusted difference of 0.50 or greater. This item was relatively easier (i.e., 0.61) for non-LBOTE students.

Appendix G includes DIF plots that show for each of the items the observed curves by language group compared to the expected ICC.

Indigenous Status DIF

Appendix H includes scatter plots for examining Indigenous DIF in the five domains by four year levels. Writing Indigenous DIF was performed by combining all four grades. These plots showed that there were not many items that showed notable differences in the relative item difficulties.

Table 5.7 lists a total of items that show potential Indigenous DIF with an absolute adjusted difference of 0.60 or greater. The larger value (i.e., 0.60 instead of 0.50) was used in order to identify only the items that showed larger DIF. Figure 5.5 depicts one reading item (Item r3q01) with an absolute adjusted difference of 0.60 or greater. This item was relatively easier (i.e., 1.42) for non-Indigenous students.

Appendix H provides the item DIF plots for items listed in Table 5.7. The plots show for each of the items, the observed curves by Indigenous group compared to the expected ICC. In interpreting the plots, it should be noted that there may not be many Indigenous students along parts of the ability range. As a result, one would expect larger variability of empirical probabilities (i.e., the dots connected by dashed lines) about the model-based curve (the solid curves).

State/Territory DIF

The number of items showing state/territory related DIF with an absolute adjusted difference of 0.50 or greater in reading, spelling, grammar and punctuation, and numeracy are listed in Table 5.8. In the heading of Table 5.8, 'E' indicates that the item is relatively easier for the jurisdiction, and 'H' indicates that the item is relatively harder for the jurisdiction. There were 15 items in reading, 12 items in spelling, 11 items in grammar and punctuation, and 16 items in numeracy across all four year levels that showed potential DIF for some jurisdictions. The total number of items showing state/territory DIF may not match with the sum of the cells in each domain because the same items may be flagged in multiple jurisdictions. Table 5.8 can be read in conjunction with Appendix I, from which the items showing state/territory related DIF can be identified. For example, from Table 5.8, there were four items in year 7 reading showing DIF in NT when compared to the national level, with three items being harder (i.e., r7q04, r7q05, and r7q13) and one item being easier (i.e., r7q06). The adjusted differences are 0.639, 0.503, 0.649, and -0.541, respectively as seen from Appendix I.

To examine the state/territory DIF for the writing test, the expected score curves of 10 rating criteria were plotted for the eight states/territories in Appendix J. None of the criteria showed notable differences across states/territories.

Table 5.5. Number of Items Showing Gender DIF by Domain by Year Level

Year Level	Reading		Spelling		Grammar and Punctuation		Numeracy	
	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items
3	36	0	25	4	26	2	35	1
5	37	0	25	5	26	0	40	3
7	50	1	30	5	28	0	64	5
9	49	2	30	5	28	0	64	3

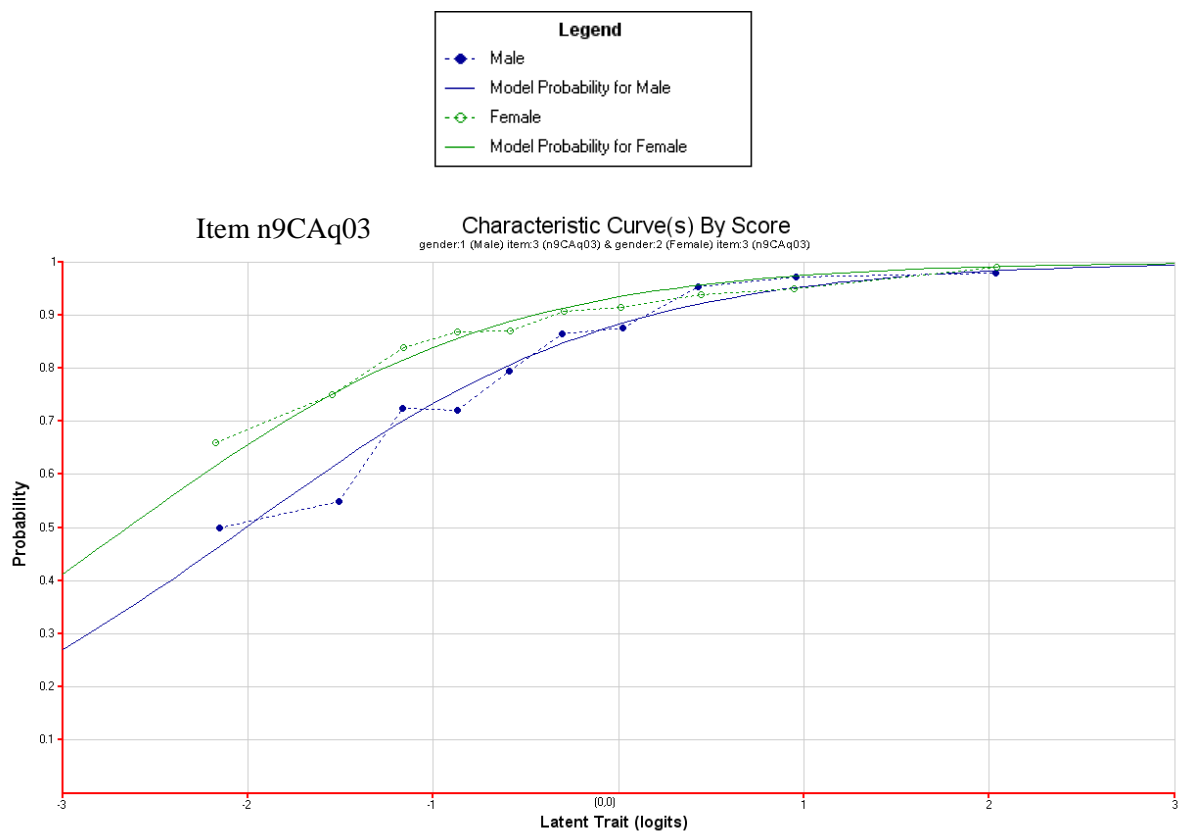


Figure 5.3. Example of item characteristic curves displaying gender DIF.

Table 5.6. Number of Items Showing LBOTE DIF by Domain by Year Level

Year Level	Reading		Spelling		Grammar and Punctuation		Numeracy	
	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items
3	36	1	25	0	26	1	35	1
5	37	0	25	3	26	2	40	2
7	50	1	30	3	28	5	64	1
9	49	0	30	2	28	3	64	3

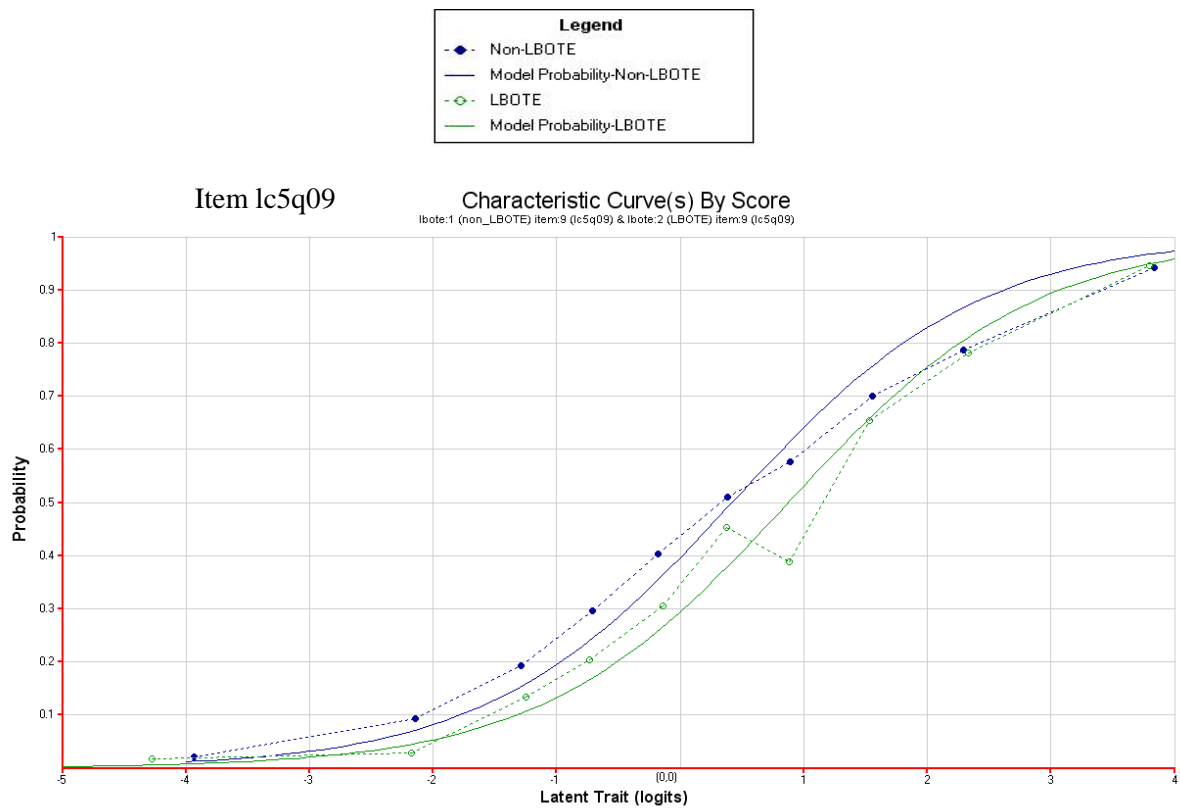
**Figure 5.4. Example of item characteristic curves displaying LBOTE DIF**

Table 5.7. Number of Items Showing Indigenous DIF by Domain by Year Level

Year Level	Reading		Spelling		Grammar and Punctuation		Numeracy	
	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items	Total of Test Items	Total of DIF Items
3	36	14	25	2	26	9	35	10
5	37	11	25	1	26	6	40	9
7	50	10	30	0	28	7	64	12
9	49	6	30	2	28	4	64	14

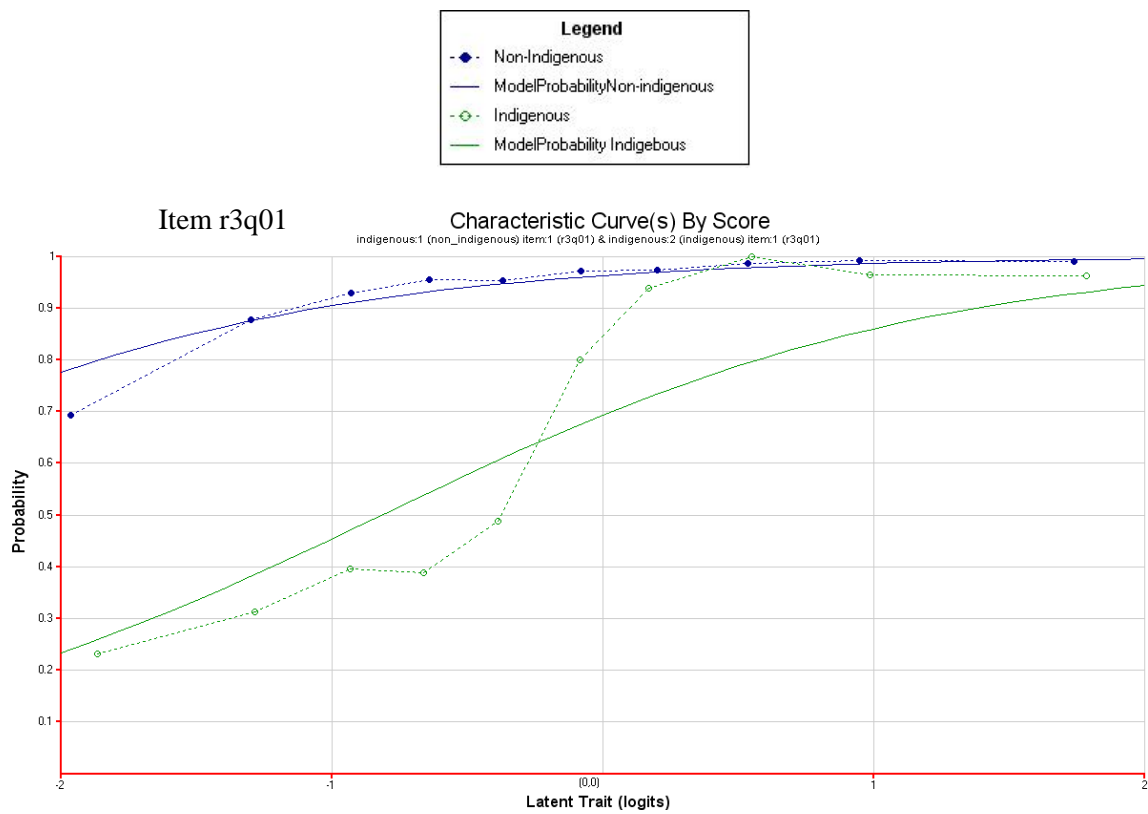


Figure 5.5. Example of item characteristic curves displaying Indigenous DIF

Table 5.8. Number of Items Showing State/Territory DIF by Domain by Year Level

Domain	Year Level	NSW		VIC		QLD		WA		SA		TAS		ACT		NT		
		E	H	E	H	E	H	E	H	E	H	E	H	E	H	E	H	
Reading	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	
	5	0	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	1
	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	
	9	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1
Spelling	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
	5	1	0	0	0	1	0	0	0	0	0	1	0	1	0	1	0	
	7	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	0	
	9	0	1	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0
GP	3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2	
	5	1	0	2	1	1	0	0	0	0	0	0	0	1	0	0	2	
	7	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1	
	9	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Numeracy	3	0	0	1	0	2	0	0	0	0	0	0	0	0	0	1	0	
	5	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	3	
	7	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	1	
	9	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	

Note. 'E' indicates that the item is relatively easier for the jurisdiction, and 'H' indicates that the item is relatively harder for the jurisdiction. Because the same items may be flagged in multiple jurisdictions, the total number of items showing state/territory DIF may not match with the sum of the cells in each domain.

CHAPTER 6. EQUATING PROCESS

NAPLAN results are reported using five national achievement scales, one for each of the assessed domains of literacy – reading, writing, spelling, and grammar and punctuation – and one for numeracy. The vertical and horizontal equating design is represented schematically in terms of the data matrix in Figure 6.1. Each year in NAPLAN, the scales are vertically equated so that each NAPLAN achievement scale spans Years 3, 5, 7 and 9; i.e., there is a single scale for each assessment domain. All assessments other than writing are vertically equated by including common items in tests administered to adjacent year levels; i.e. Year 3 and Year 5, Year 5 and Year 7, Year 7 and Year 9. The responses to the common items are represented as the shaded columns in Figure 6.1 that overlap between adjacent year levels. For the purpose of monitoring student achievement over time, the 2013 NAPLAN scale for each domain needs to be horizontally equated to the historic NAPLAN reporting scale.

It is not possible to use common items to horizontally equate the tests over time because NAPLAN test materials are not considered to be secure after administration. Instead, common-person equating is used. The secure equating test forms used for horizontal equating in 2009 through 2012 were used for common-person equating again in 2013. Students in the equating sample comprising students from Years 3, 5, 7 and 9 were administered the secure equating forms at their year level in addition to the 2013 main forms. The equating data were used to equate the 2013 tests onto the existing NAPLAN reporting scales.

The horizontal equating provides one basis for placing the 2013 NAPLAN Year 3, Year 5, Year 7 and Year 9 tests on the vertical NAPLAN scale for each domain because item locations for the secure forms are on the NAPLAN scale. The common items for adjacent year levels also provide a basis for vertically equating the scales. The results of common person equating were checked against the results of 2013 common-item vertical equating and both sets of results were taken into consideration in finalising the scaling of the 2013 reading, spelling, grammar and punctuation, and numeracy tests.

In 2013 a persuasive writing task was administered in NAPLAN. In 2011, a persuasive writing scale, separate from the narrative scale, was introduced. In 2013, the persuasive writing test was equated to the 2011 persuasive writing scale. The process of equating writing is described in section 6.6.

6.1 Horizontal Equating for Reading, Spelling, Grammar and Punctuation, and Numeracy

The horizontal equating design involved a two-step procedure that combines common-person and common-item test equating methods. The common-person equating was achieved through the equating sample. The equating was carried out using secure equating forms that were administered with the NAPLAN 2013 tests for reading, spelling, grammar and punctuation, and numeracy. Each student in the equating sample completed an equating form in addition to the NAPLAN 2013 tests that the full cohort to which they belong completed. Figure 6.1 shows the horizontal equating design for each of reading, spelling, grammar and punctuation, and numeracy at each year level.

The equating form for each domain at each year level had already been scaled onto the historic NAPLAN scale in 2009. In 2013, the first step was to place the NAPLAN 2013 test and the equating form on the same scale, for each domain at each year level, using the common-person equating data. The second step was to equate each of the NAPLAN tests onto the historic

NAPLAN domain scale using the relevant equating form through the process of common-item equating.

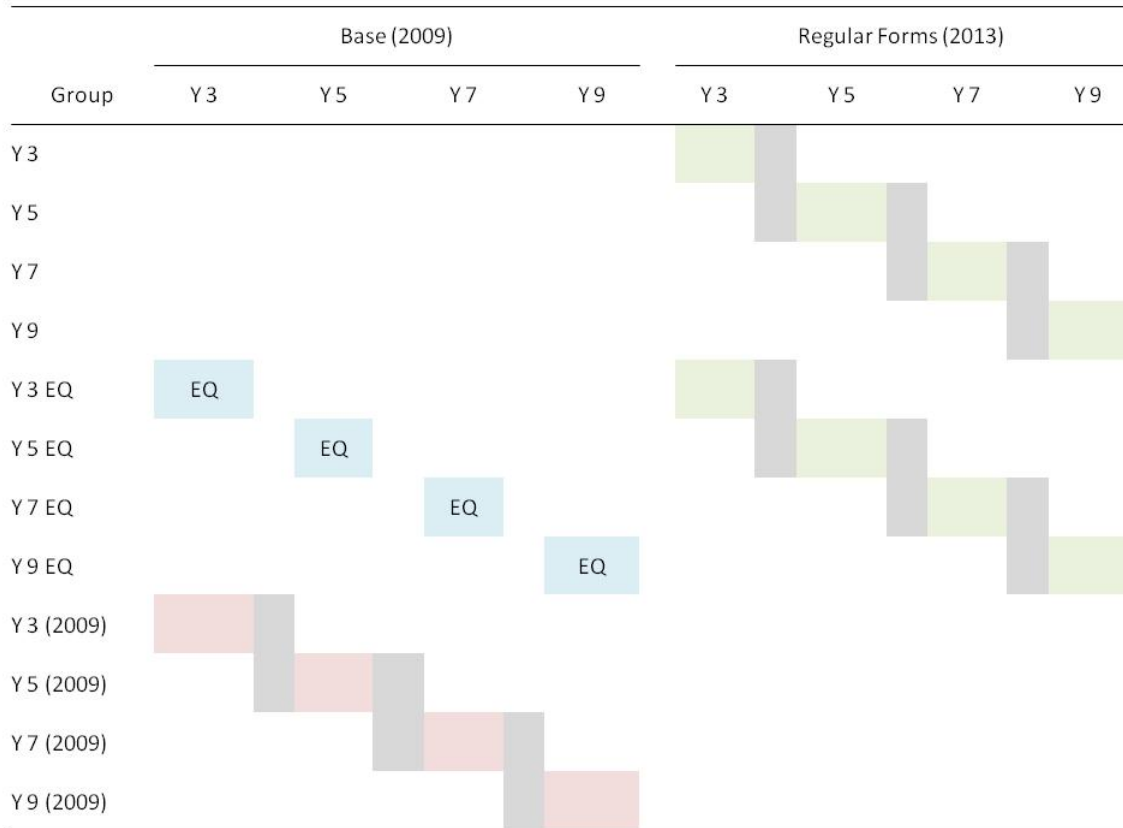


Figure 6.1. Equating design for each assessment domain.

The vertical scales were originally established in 2008. In each new calendar year, link items are included in the tests for adjacent year levels and new vertical equating is conducted. This provides the basis for obtaining new estimates of vertical shift constants to equate vertical tests. The tests are equated back using the secure forms. The secure forms are on the original scale. Consequently, there are two ways of vertically equating. First, the tests have direct vertical links. Second, the horizontal equating through equating forms places the items on the original scale, which had vertical links. Therefore, the horizontal equating provides indirect vertical links that ideally will agree with the direct links. Where divergences are found, these warrant further investigation. In most cases, there was reasonable agreement between the horizontal and vertical links.

6.2 Calibrations of the Equating Forms and Item Reviews

Test calibrations were carried out separately for each of the 16 equating test forms (four domains at four year levels). The equating form and the corresponding 2013 test were jointly calibrated for each domain and each year level using the combined common-person equating data.

The analyses of the equating data described above provided a set of item parameters on the preliminary NAPLAN 2013 scale for each of the equating forms. The set of 2013 equating form item estimates was then compared with the item estimates on the historic NAPLAN scale from 2009 equating for each equating form. Items were considered for deletion as links if they functioned poorly (based on infit MnSq, item discrimination and ICCs) and/or if their relative

locations differed by an absolute value of greater than 0.3 compared with their locations on the original 2009 scale for the relevant secure form. A more detailed explanation of the criteria is provided in section 6.3.

Figure 6.2 to Figure 6.17 show the comparisons of the 2009 item parameters and 2013 item parameters for items on each of the 16 equating tests. Each figure shows a pair of parameter plots of the linked items, before and after review, in each domain and for each year level. Ideally, the bivariate points would follow the identity line, which is shown in each figure for reference as a solid line. Any change to the standard deviations of link items by a scaling factor would imply that the same scaling factor should be used for the NAPLAN test. This is because the equating items are on the same scale with the same unit as the NAPLAN items. No scaling factors based on equating have been used in the past and none were used in 2013. However, the issue has been discussed with the Measurement Advisory Group in previous years, particularly in relation to grammar and punctuation.

Some equating items were slightly modified to improve the links over time. These items are omitted from the plots because they cannot be expected to have comparable locations.

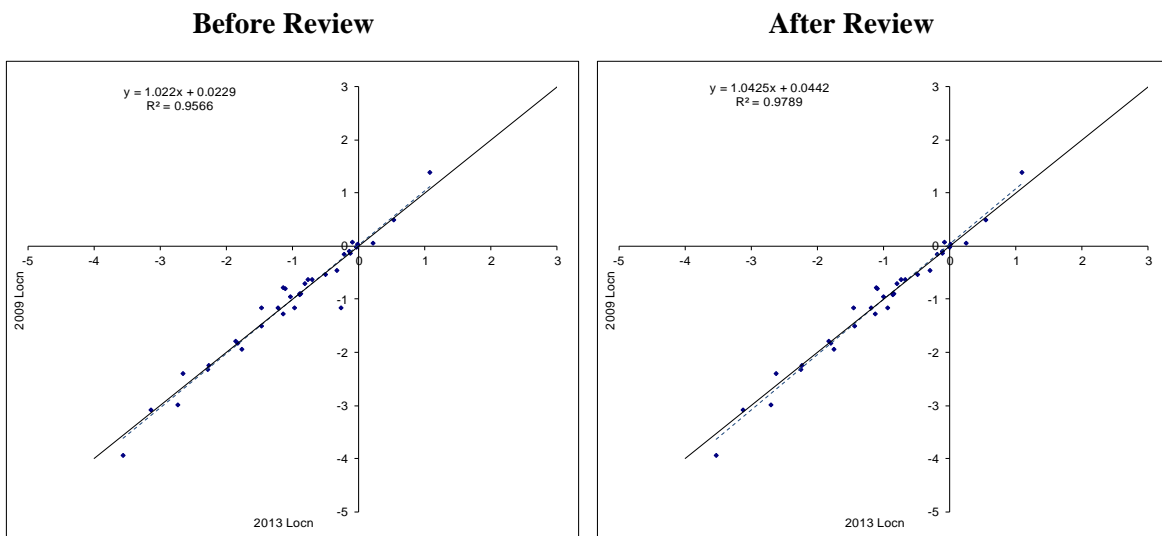


Figure 6.2. Links review for reading equating form Year 3 (2013 vs. 2009).

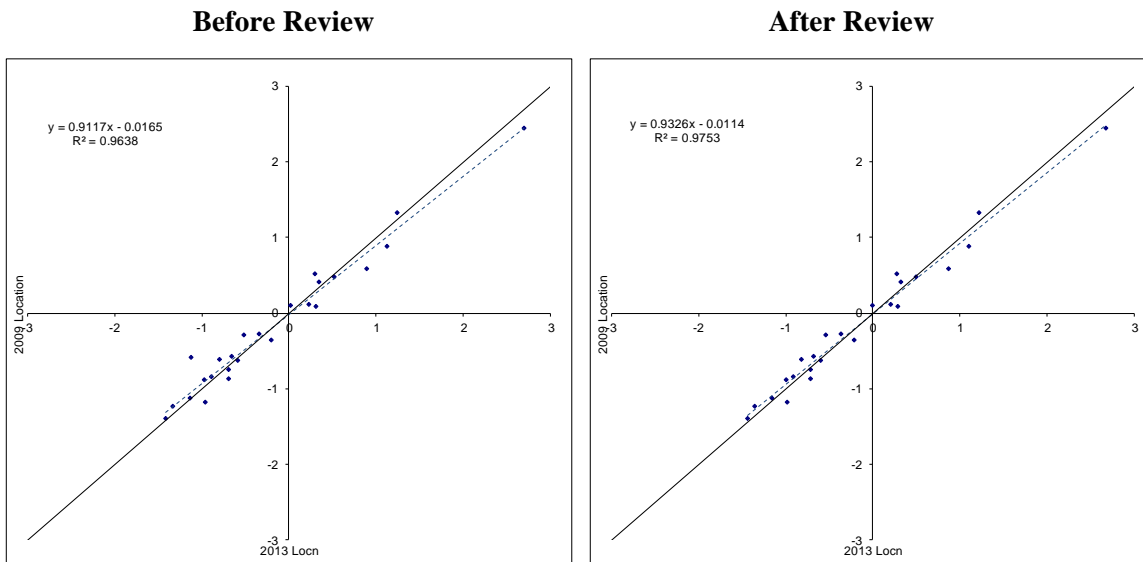


Figure 6.3. Links Review for reading equating form Year 5 (2013 vs. 2009).

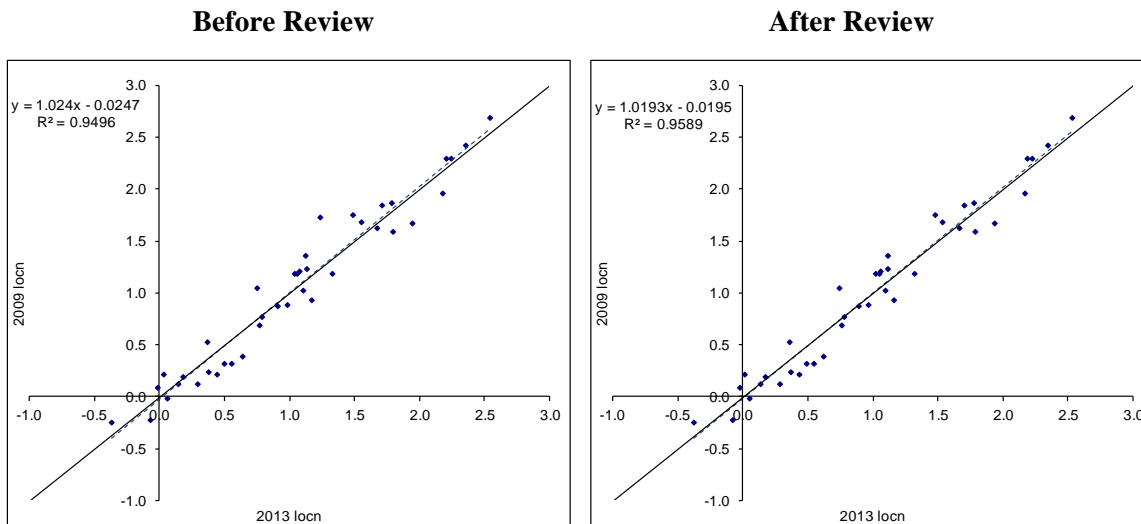


Figure 6.4. Links Review for reading equating form Year 7 (2013 vs. 2009).

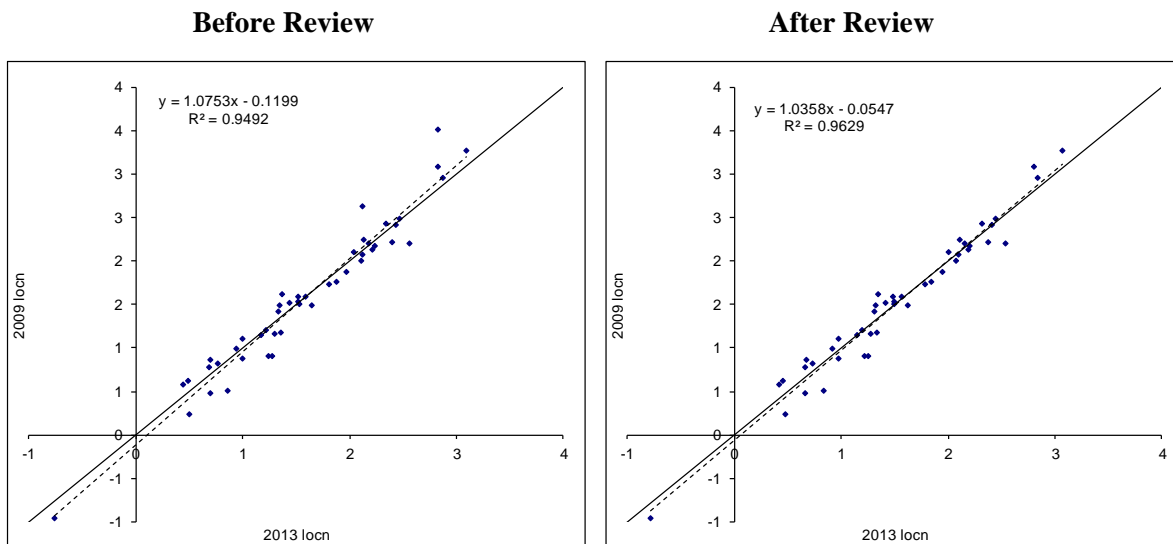


Figure 6.5. Links review for reading equating form Year 9 (2013 vs. 2009).

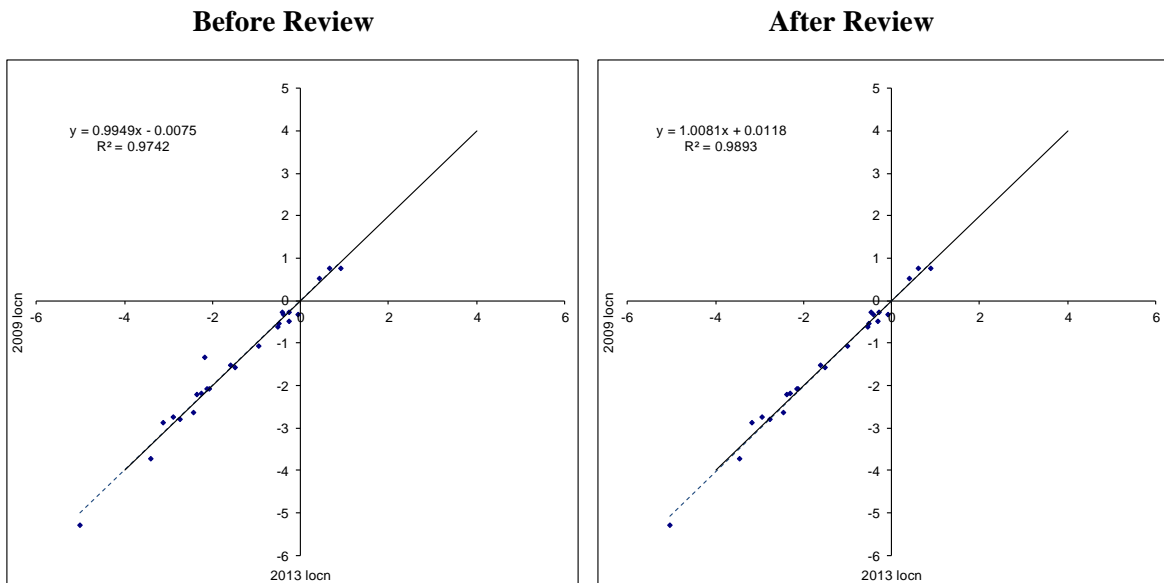


Figure 6.6. Links review for Spelling equating form Year 3 (2013 vs. 2009).

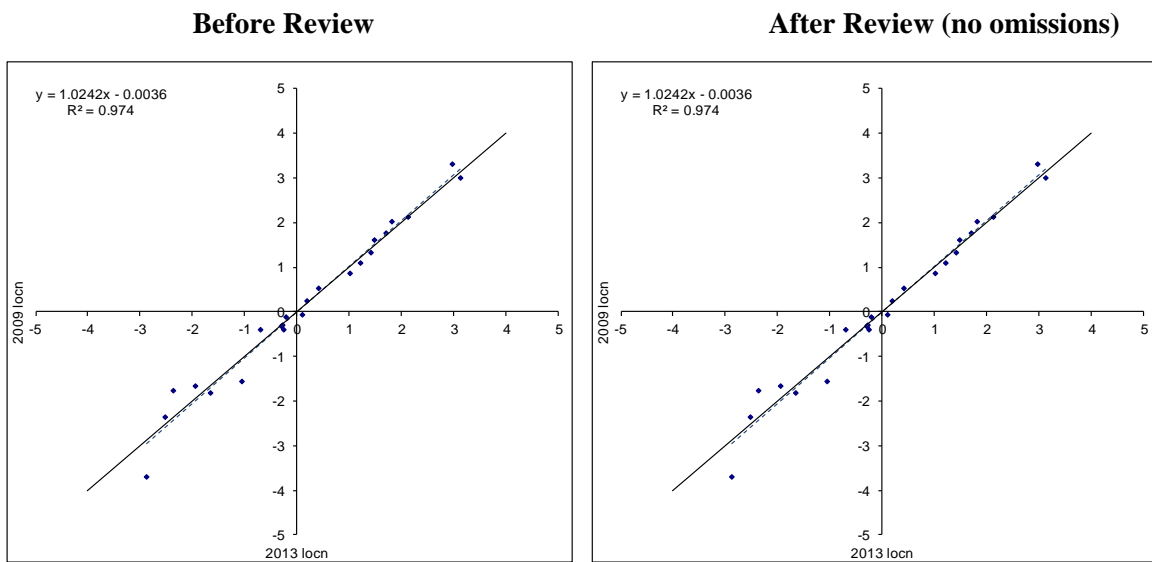


Figure 6.7. Links review for Spelling equating form Year 5 (2013 vs. 2009).

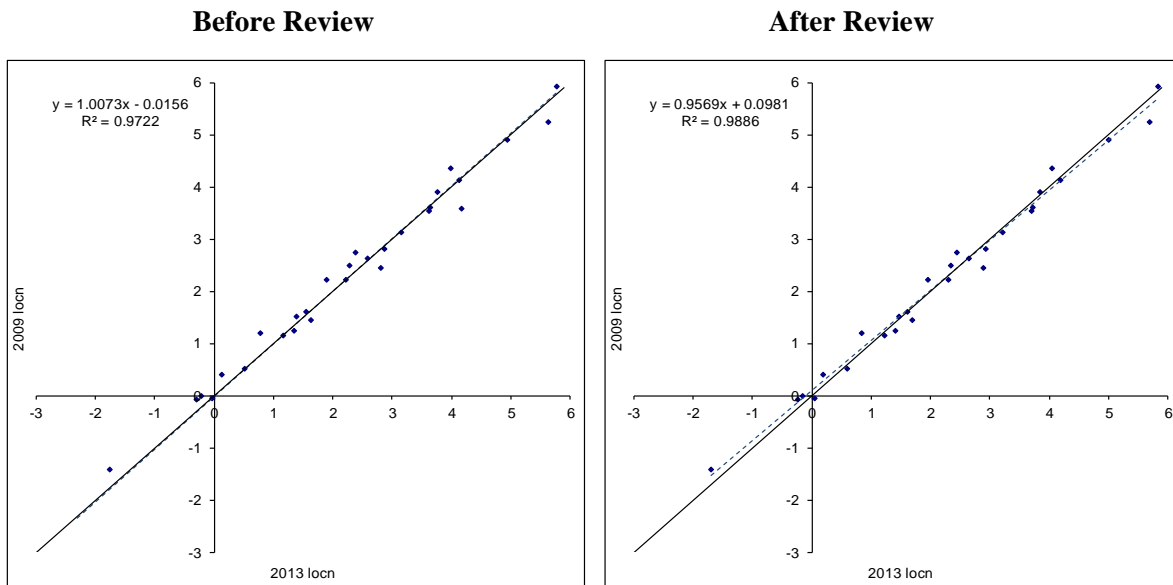


Figure 6.8. Links Review for Spelling equating form Year 7 (2013 vs. 2009).

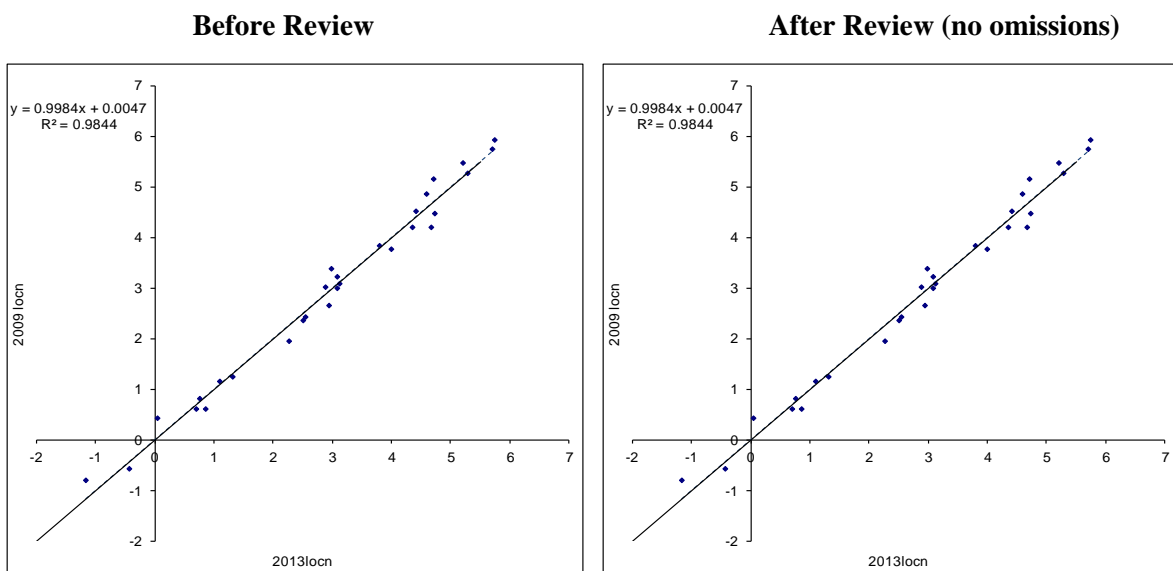


Figure 6.9. Links Review for Spelling equating form Year 9 (2013 vs. 2009).

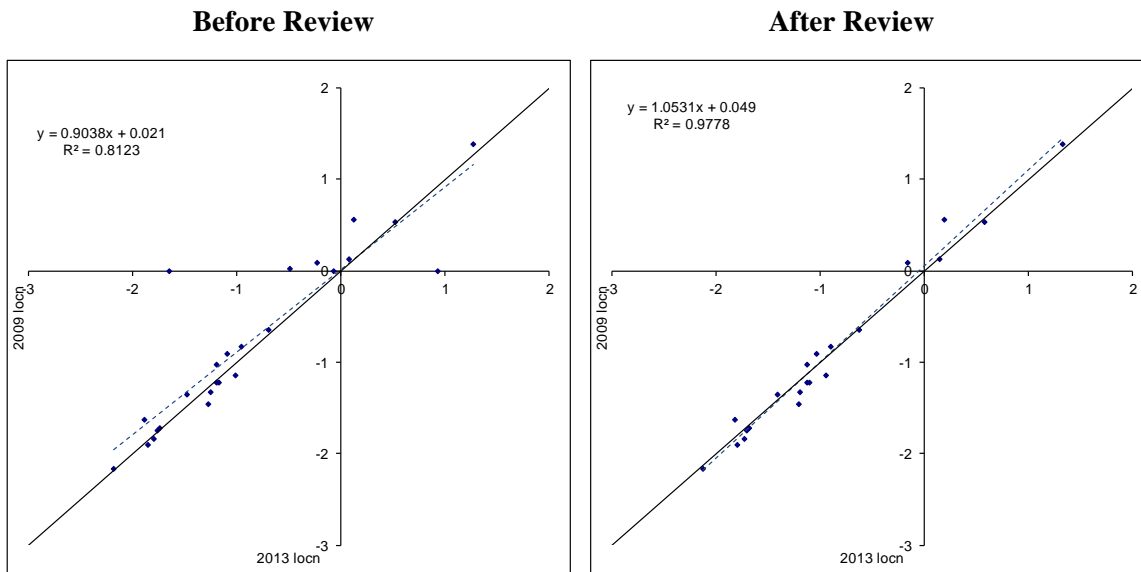


Figure 6.10. Links review – Grammar and Punctuation equating form Year 3 (2013 vs. 2009).

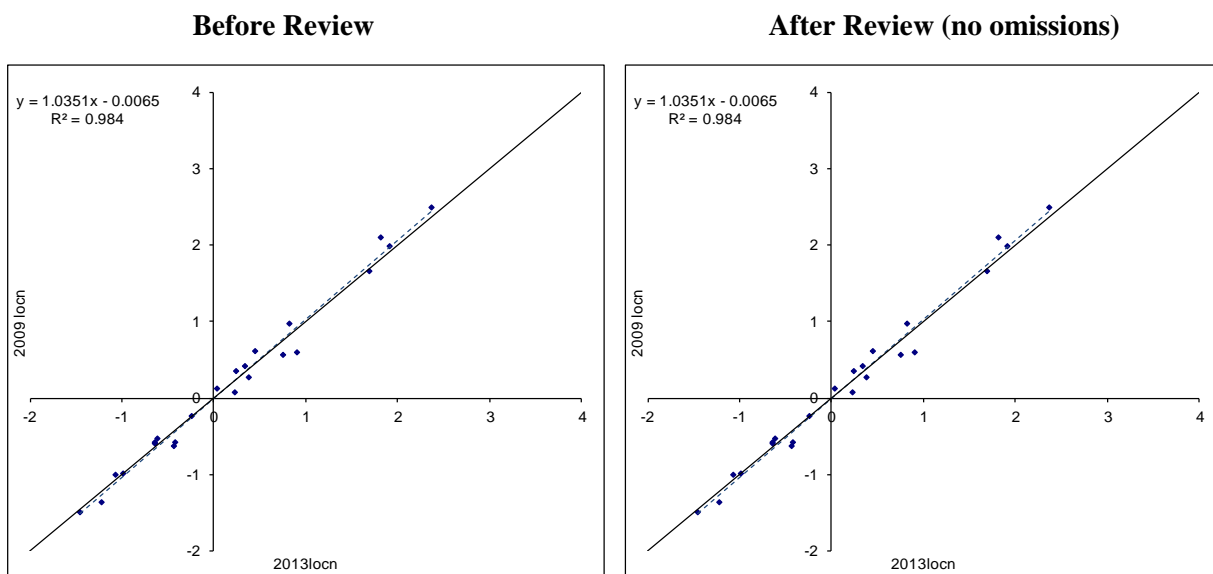


Figure 6.11. Links review for Grammar and Punctuation equating form Year 5 (2013 vs. 2009).

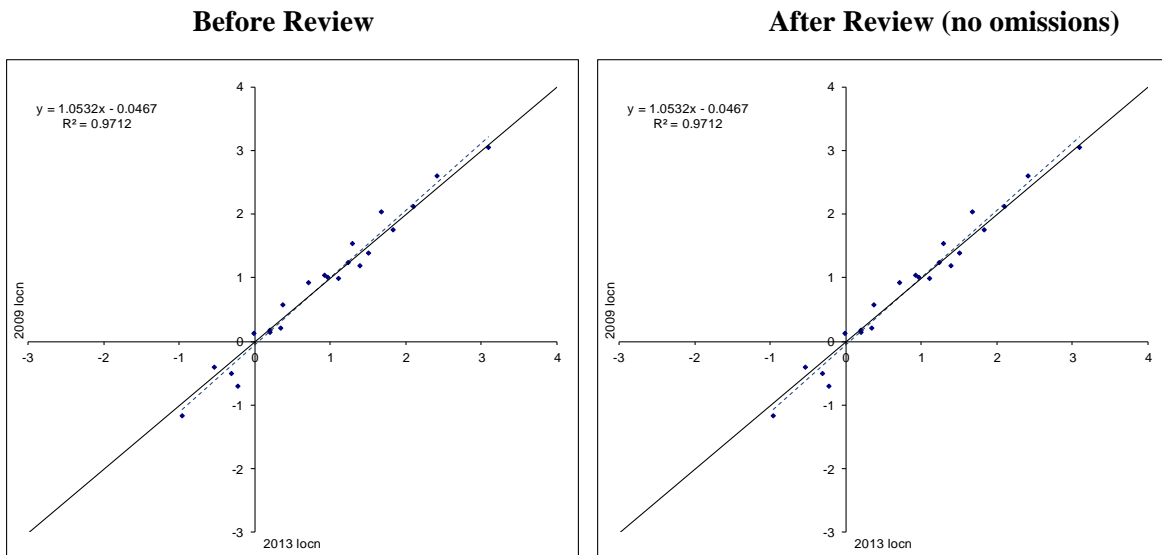


Figure 6.12. Links review for Grammar and Punctuation equating form Year 7 (2013 vs. 2009).

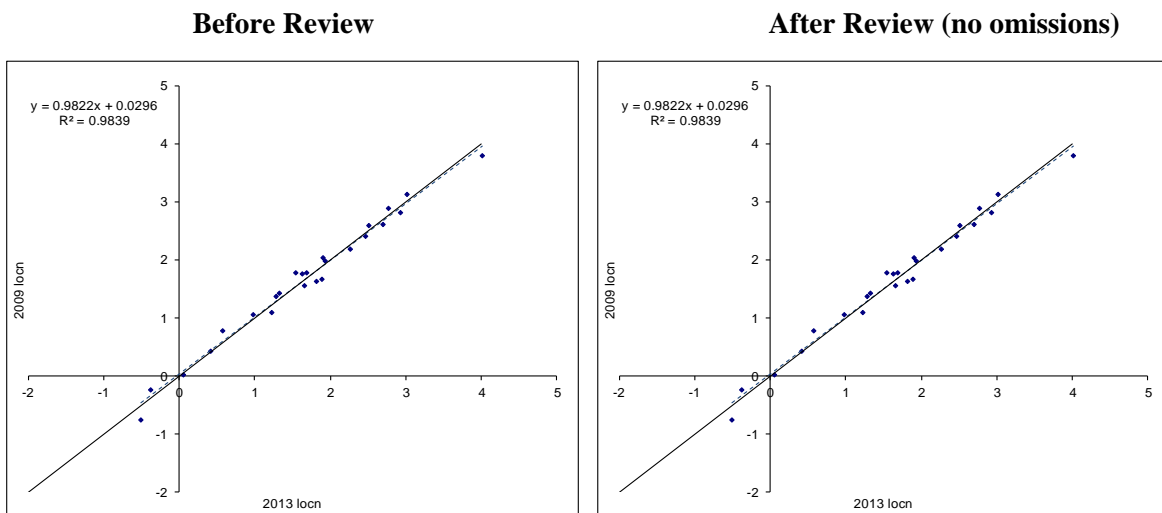


Figure 6.13. Links review for Grammar and Punctuation equating form Year 9 (2013 vs. 2009).

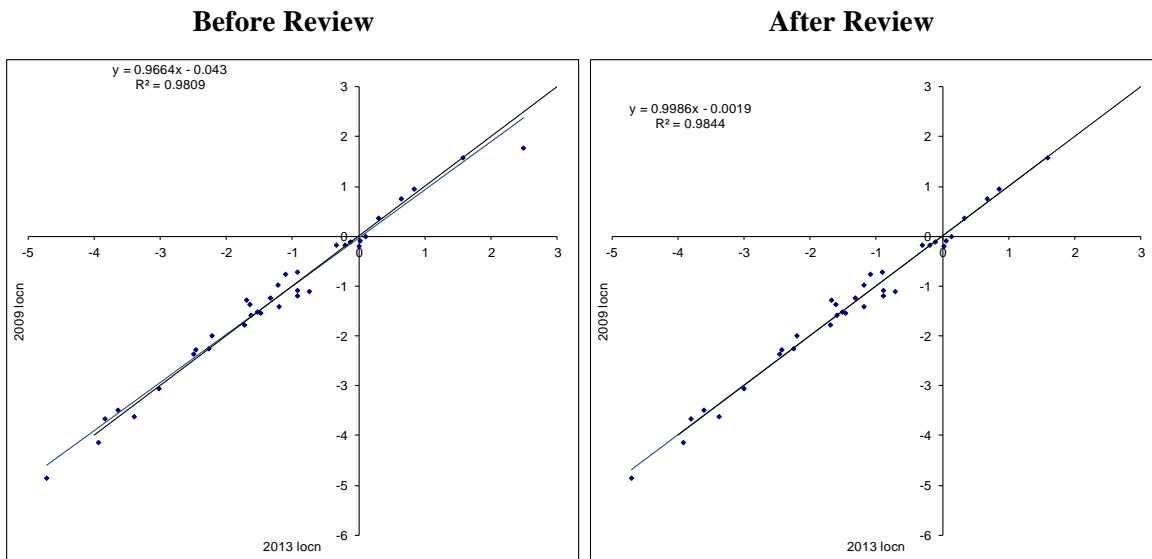


Figure 6.14. Links review for numeracy equating form Year 3 (2013 vs. 2009).

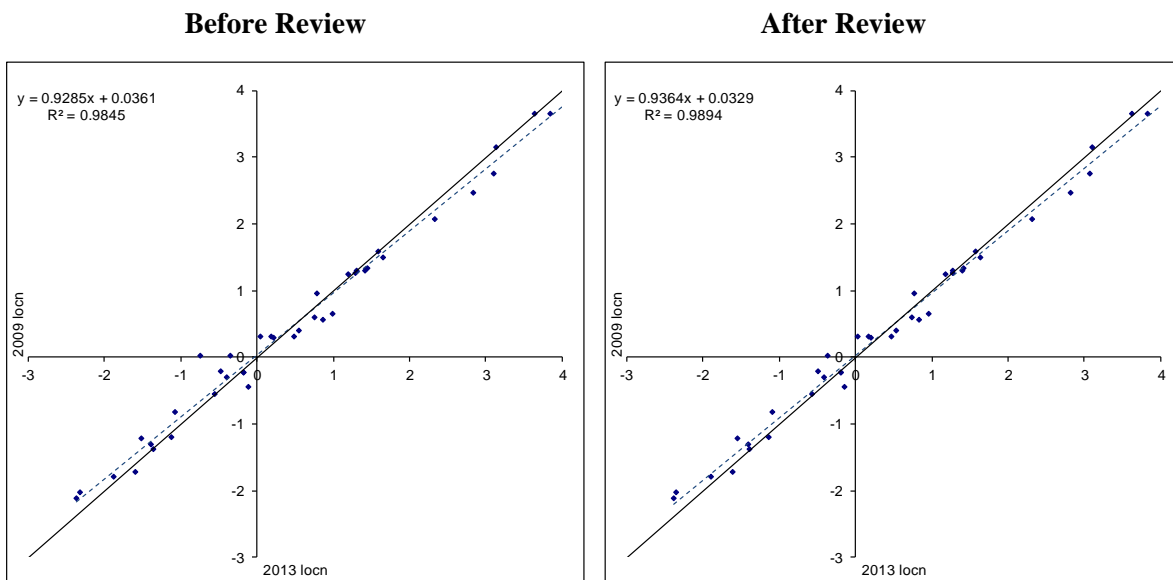


Figure 6.15. Links review for numeracy equating form Year 5 (2013 vs. 2009).

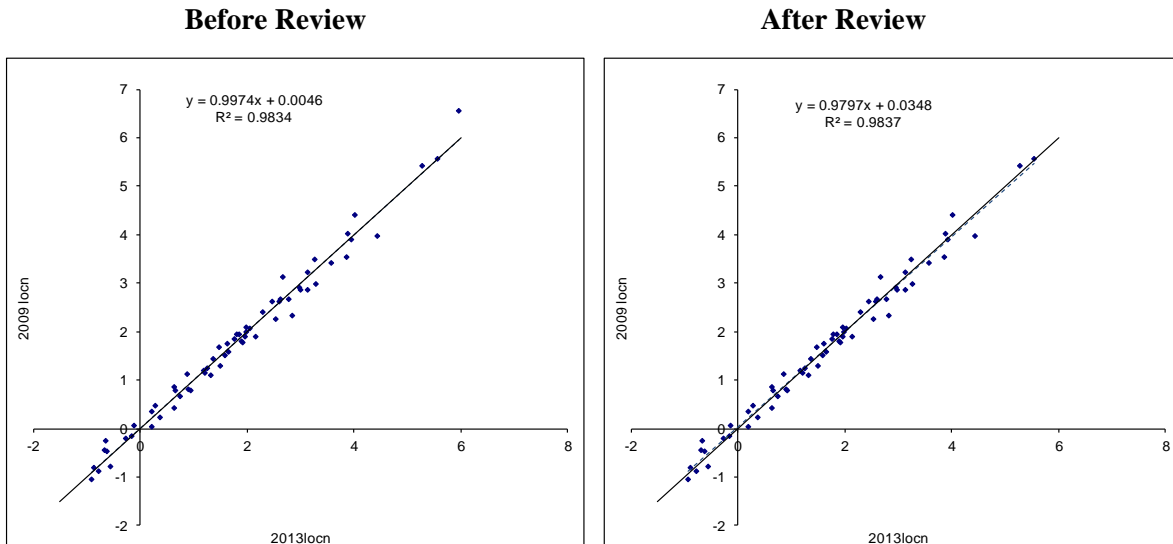


Figure 6.16. Links review for numeracy equating form Year 7 (2013 vs. 2009).

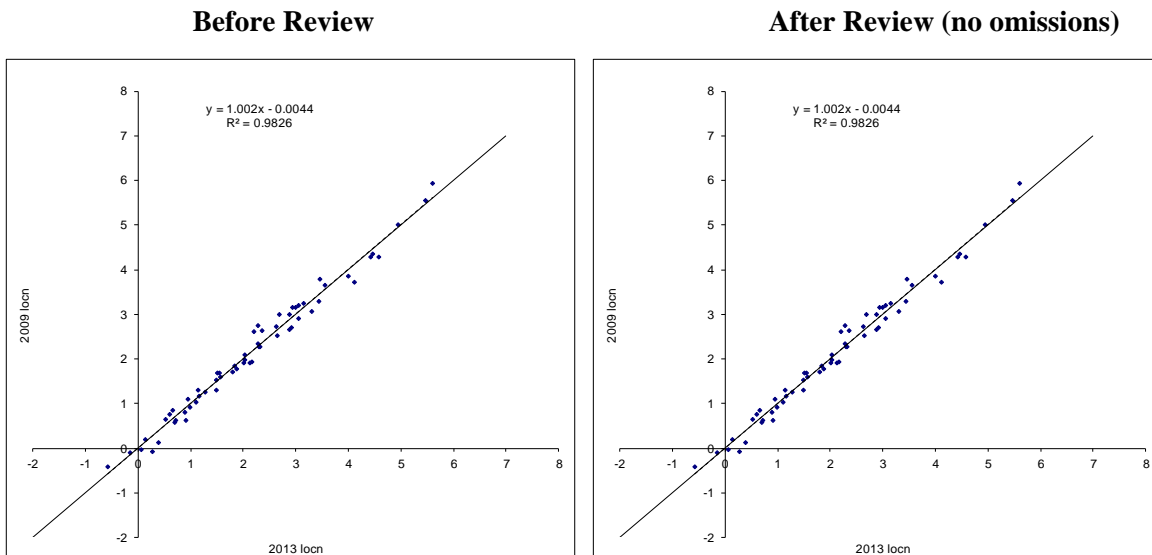


Figure 6.17. Links review for numeracy equating form Year 9 (2013 vs. 2009).

The secure equating forms were calibrated with the NAPLAN 2013 forms. The locations of the equating items from the 2013 calibrations were compared with their locations from the 2009 calibration. For each domain and each year level, a final set of link items was identified. The final link items were used to calculate the shift to be applied to equate the 2013 equating forms onto the historic NAPLAN reporting scale, thus aligning the 2013 scale with the historic NAPLAN reporting scale.

Table 6.1 lists the horizontal shift-constants for each domain at each year level. The shifts are those required to equate the mean of the final set of link items for each domain and year level, based on the 2013 calibration, with the 2009 item locations of the same set of link items.

Table 6.1. Horizontal Shifts for Equating the 2013 Item Locations with 2009 Item Locations

Year Level	Reading	Spelling	Grammar & Punctuation	Numeracy
3	-0.281	-1.617	-0.256	-1.122
5	0.518	0.616	0.432	0.501
7	1.449	2.066	1.056	1.579
9	1.847	3.131	1.337	2.410

The horizontal equating of each of the 2013 NAPLAN domain scales in reading, spelling, grammar and punctuation, and numeracy to the corresponding historic NAPLAN scales had provisionally put each of these domain scales on the vertical NAPLAN scales. The vertical scales, however, was constructed based on the original vertical equating of the tests. These original results were compared with the vertical equating results based on the 2013 tests and both sets of results were taken into consideration in determining the final shifts. The vertical equating of the 2013 tests is described in the next section.

6.3 Common-Item Vertical Equating of NAPLAN 2013 Tests

As in previous years of testing, the 2013 NAPLAN reading, spelling, grammar and punctuation, and numeracy tests were vertically equated across Years 3, 5, 7 and 9 using link items embedded in tests in adjacent year levels. The quality of these link items was systematically reviewed for each domain. Only items that were considered to be good link items were used in the vertical equating.

Starting with the separate calibration of each test and using delta-centered item parameters, a vertical scale was constructed by determining the shift-constants (translation) between adjacent tests to equate the common items such that the tests are on a common scale.

A common item was considered for omission (i.e. not to be used as a link item) based on the fit of the item and evidence for differential item functioning (DIF). An overarching principle employed has been to maximise the number of links retained where possible. Operationally, this means erring on the side of using a link where there was doubt regarding the basis for its omission.

A four-stage process was used, as detailed to follow. In each stage, the transformed/equated estimates for the year level being equated to the other are used. For example, use Year 5 estimates and compare these with Year 3 estimates equated to Year 5 estimates using the provisional shift constant at the relevant point in the process.

Vertical Equating Stages

The vertical equating process was undertaken in four stages as follows:

1. Examine the initial cross-year level scatterplot;
2. Identify the optimal reference set given item functioning;
3. Identify items with high or low discrimination and omit them if they affect the discrimination in the predicted direction to a sufficient degree (retain where in doubt);
4. Sequentially omit items with cross year-level DIF that affect the vertical shift.

Items were considered for deletion in the third stage based on high or low discrimination if the discrimination (slope) estimate lay outside the range of approximately 0.8 to 1.15 and based on visual inspection of the level of discrimination evident in the ICC for the item. (The discrimination estimates were obtained from Winsteps and these are not the traditional discrimination indices.) Detailed comments were made about the functioning of items, including discrimination and evidence of guessing. The reason for this stage is that when using the Rasch model to vertically equate, high discrimination is predicted to inflate the absolute shift constant whereas low discrimination is predicted to deflate the absolute shift constant (Humphry, 2007). This method typically gives similar results to omitting items on the basis of DIF criterion. However, the point of this additional stage is to avoid using a set of items with misfit on which to base decisions about DIF.

At the last stage, items were considered for deletion based on DIF if the absolute adjusted difference was greater than 0.3 and if the absolute standardised difference was greater than 10. This is the same criterion for DIF used in previous years of testing.

After each stage, the cross-year level scatterplot was evaluated with a focus on the agreement of bivariate data with the identity line. The ratio of the standard deviations of the item locations was checked for each adjacent year level (e.g. Year 3 SD/Year 5 SD). Ideally the ratio should fall between 0.9 and 1.1. If there were insufficient items to evaluate the correspondence of the data with the identity line, it was necessary to relax the criteria applied in earlier stages of the method.

Due to the small number of links available, a decision was taken to combine vertical links from 2012 and 2013 in spelling and grammar and punctuation and to use all data to vertically link. The same approach was adopted in 2012. The option of using three years of data was considered. However, if this were continued over time, previous links would dominate the vertical scaling and there would be limited checks of new links. The decision was therefore made to use two years of data to achieve a balance between stability and the capacity to check new links.

Three sets of link items (Year 3 and Year 5, Year 5 and Year 7, Year 7 and Year 9) were reviewed for each of the four domains. In each domain, the items administered to each year level were calibrated separately. For each pair of adjacent tests with common items, mean item parameters of the common items were calculated for the tests administered to each of the two year levels. The vertical shift is the difference between the two means. The first vertical shift was applied to equate common Year 3 and Year 5 items by adjusting the Year 3 locations. The second vertical shift was applied to equate common Year 7 items with the common Year 5 items. The third vertical shift was applied to equate common Year 9 items with the common Year 7 items. The vertical shifts were computed based on the delta-centered item locations, i.e. based on usual constraint that the mean item location is 0. Thus, the vertical scale is centered about the Year 5 item locations.

In each case, the vertical shift is a constant that needs to be applied so that the mean adjusted difference is zero, i.e. so that the means of item locations for common items in adjacent year levels are equal. This permits the comparison of relative difficulties of the common items in the two tests. The standardised differences for each common item were also calculated.

For each pair of adjacent tests, one set of item parameters was then plotted against the other set of item parameters. Two plots are presented below for each review: one plot for the full set of common items before review and one plot for the retained link items after review. On the plots, each dot represents a common item. The 24 plots are shown in Figure 6.18 to Figure 6.29.

Vertical Equating of 2013 Reading Tests

Reading – Year 3/Year 5

Figure 6.18 shows the Year3/Year 5 reading links before and after review. Three items were omitted in Stages 1 and 2 due to discrimination that affected the shift in the predicted direction. A fourth item was omitted due to DIF according to the criteria adopted.

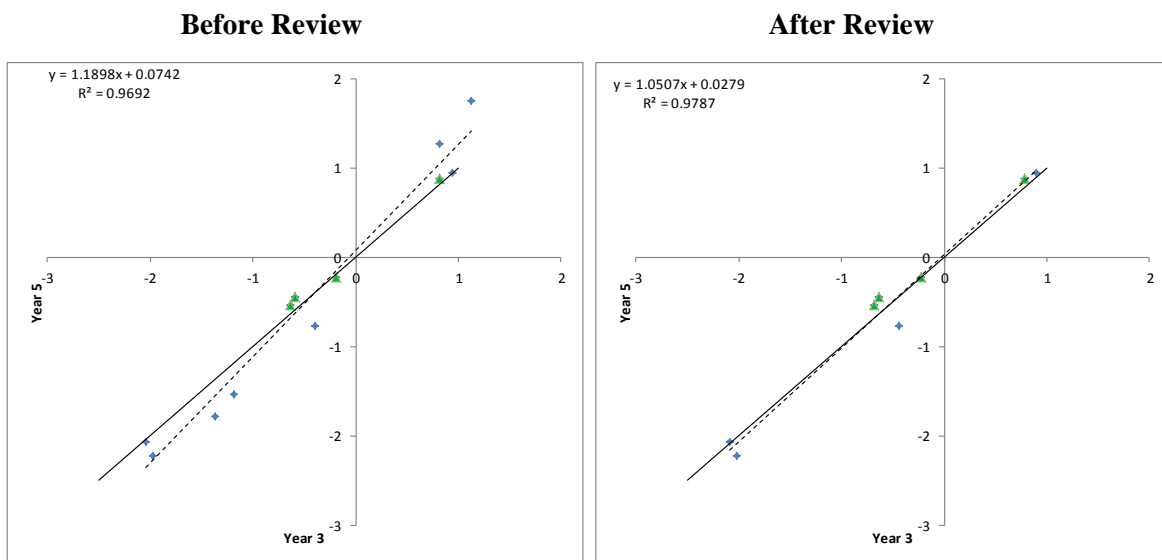


Figure 6.18. Links review for reading Year 3 and Year 5.

Reading – Year 5/Year 7

Figure 6.19 shows the Year5/Year 7 reading links before and after review. Three items were omitted on the basis of the effect of discrimination on item locations and two were omitted due to DIF according to the criteria adopted.

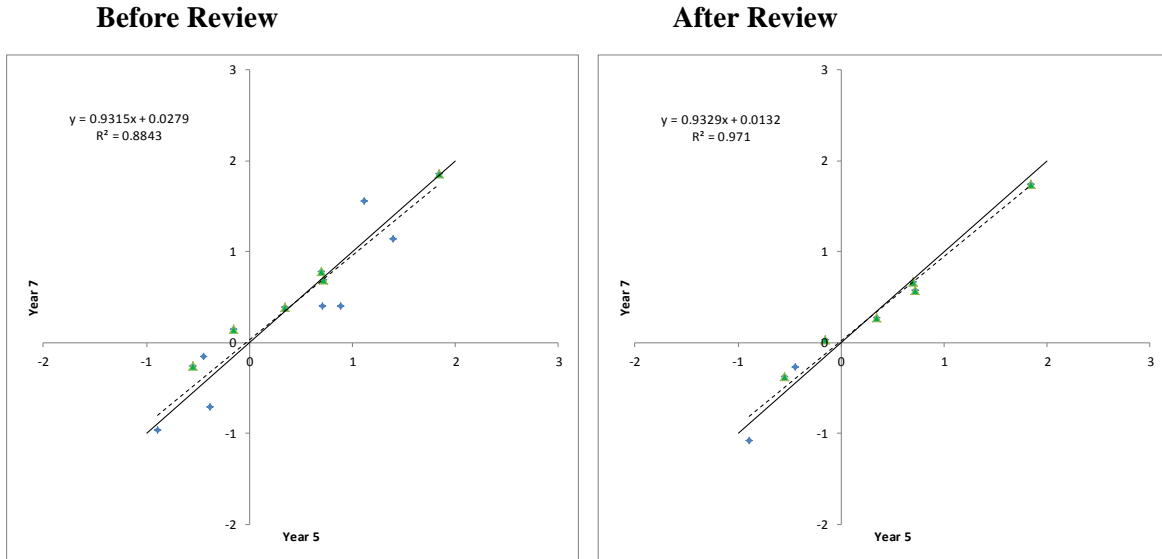


Figure 6.19. Links review for reading Year 5 and Year 7

Reading – Year 7/Year 9

Figure 6.20 shows the Year 7/ Year 9 reading links before and after review. One item with low discrimination and/or guessing was omitted and three further items were omitted on the basis of cross year-level DIF.

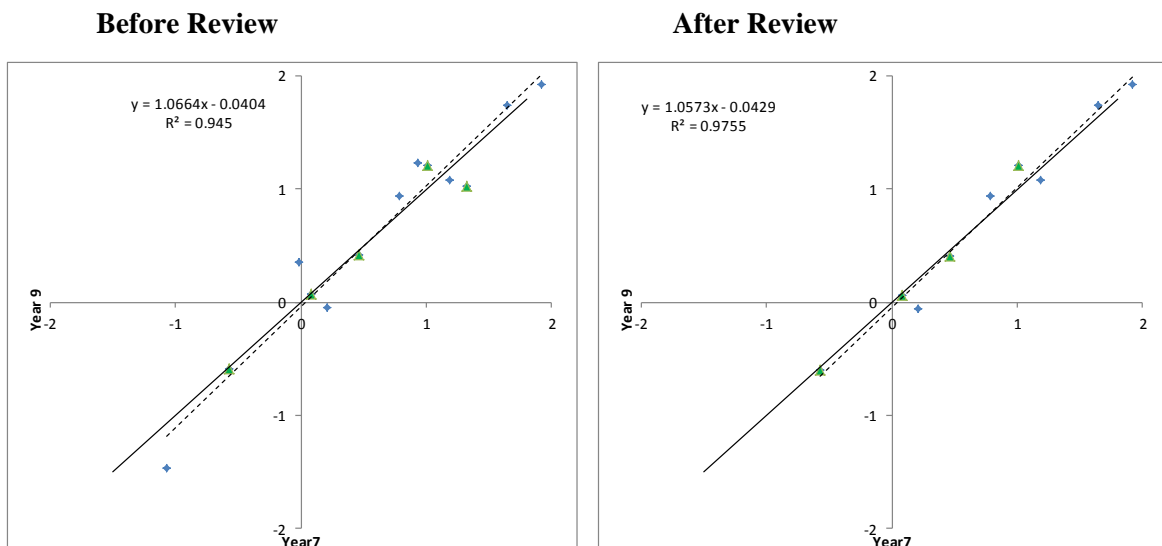


Figure 6.20. Links review for reading Year 7 and Year 9.

Vertical Equating of Spelling Tests (2012 and 2013 Pooled Items)

For spelling, vertical links from both 2012 and 2013 were used. The 2012 vertical links were equated to the 2013 scale based on the common secure form used for horizontal equating. Once the

2012 items were linked to the 2013 scale, the 2012 and 2013 items were pooled together and the vertical equating process was followed based on the four stages described above.

Spelling – Year 3/Year 5

The Year 3/Year 5 vertical equating is summarised in Figure 6.21. Links from both 2012 and 2013 were used. One item was omitted because it was highly discriminating and this affected the shift in the predicted direction. Three items were omitted due to cross year-level DIF.

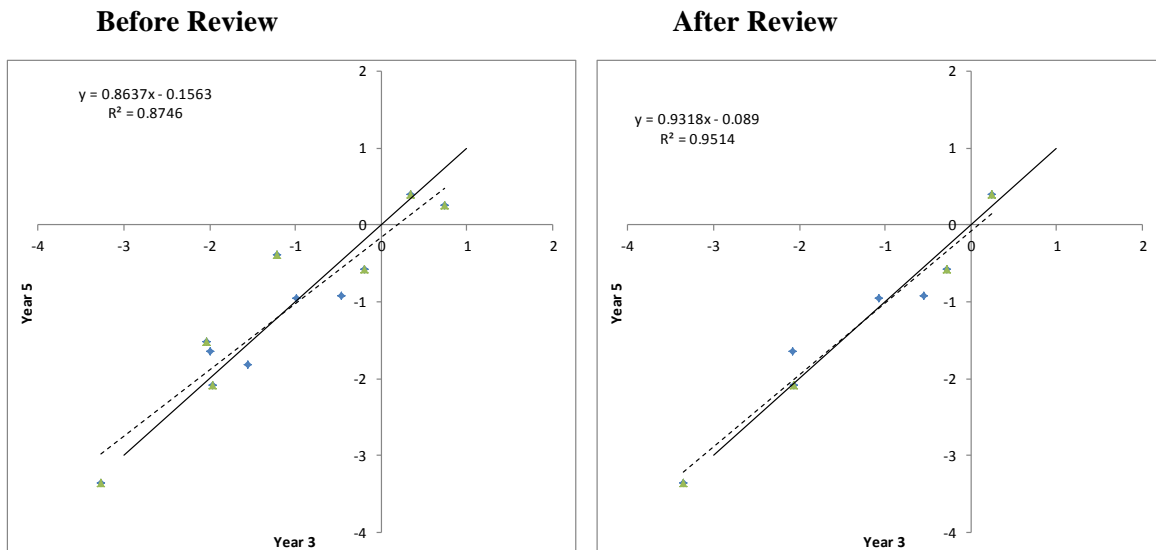


Figure 6.21. Links review for Spelling Year 3 and Year 5.

Spelling – Year 5/Year 7

The Year 5/ Year 7 links are shown in Figure 6.22. Four items, all on the 2012 test, were omitted due to DIF.

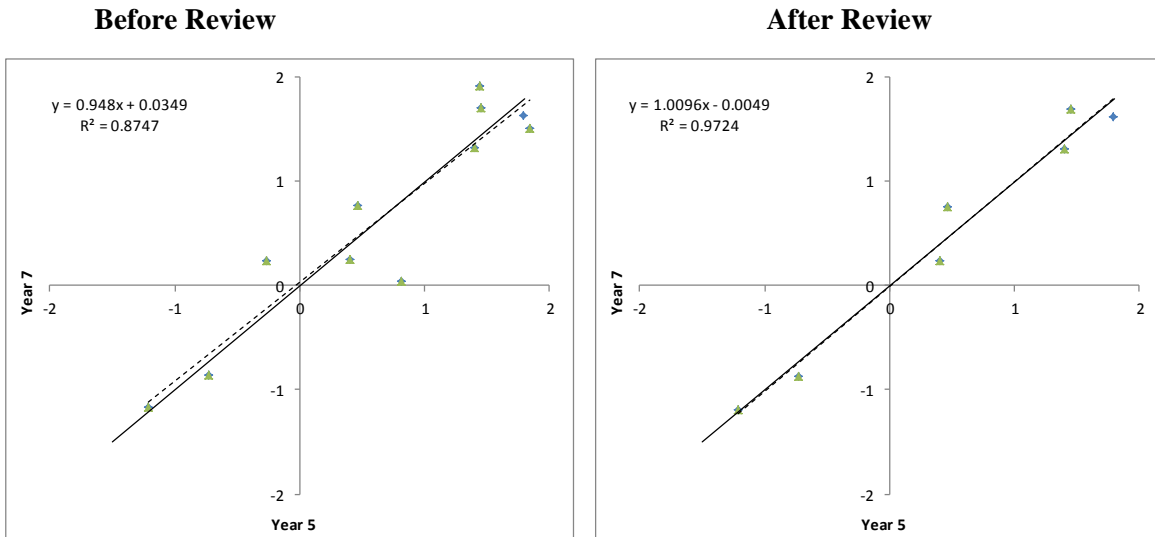


Figure 6.22. Links review for Spelling Year 5 and Year 7.

Spelling – Year 7/Year 9

The Year 7/ Year 9 links are summarised in Figure 6.23. Two items were omitted due to the effects of high and low discrimination on item estimates and one item was omitted on the basis of DIF.

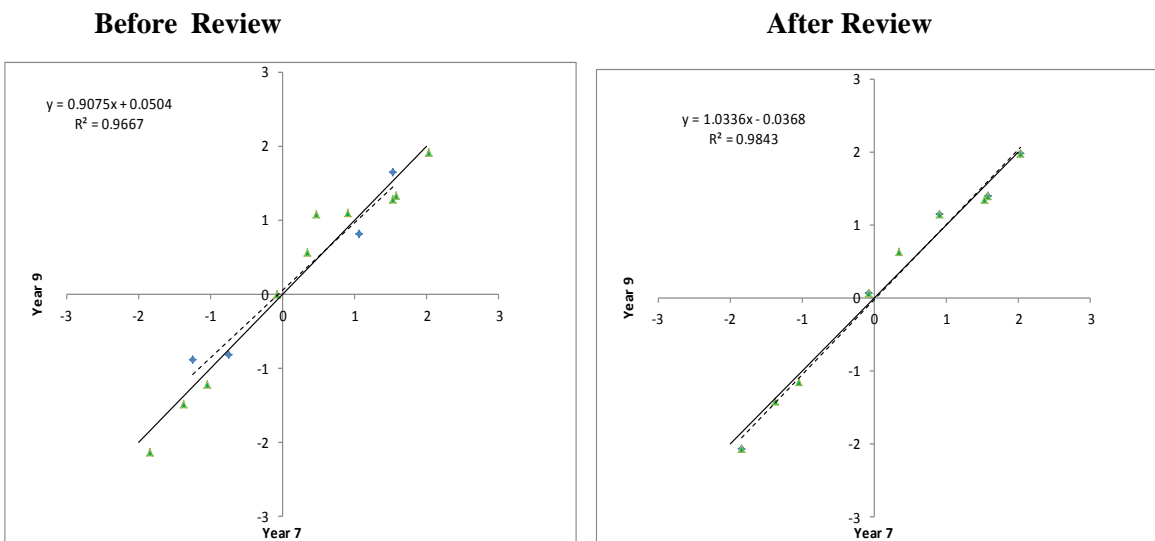


Figure 6.23. Links review for Spelling Year 7 and Year 9.

Vertical Equating of Grammar and Punctuation Tests (2012 and 2013 Pooled Items)

As for spelling, vertical links from both 2012 and 2013 were used to vertically equate grammar and punctuation. The 2012 vertical links were equated to the 2013 scale and then the 2012 and 2013 items were pooled.

Grammar and Punctuation – Year 3/Year 5

Figure 6.24 shows the Year 3/Year 5 grammar and punctuation scatterplots before and after review. One item was omitted due to high discrimination and another due to DIF.

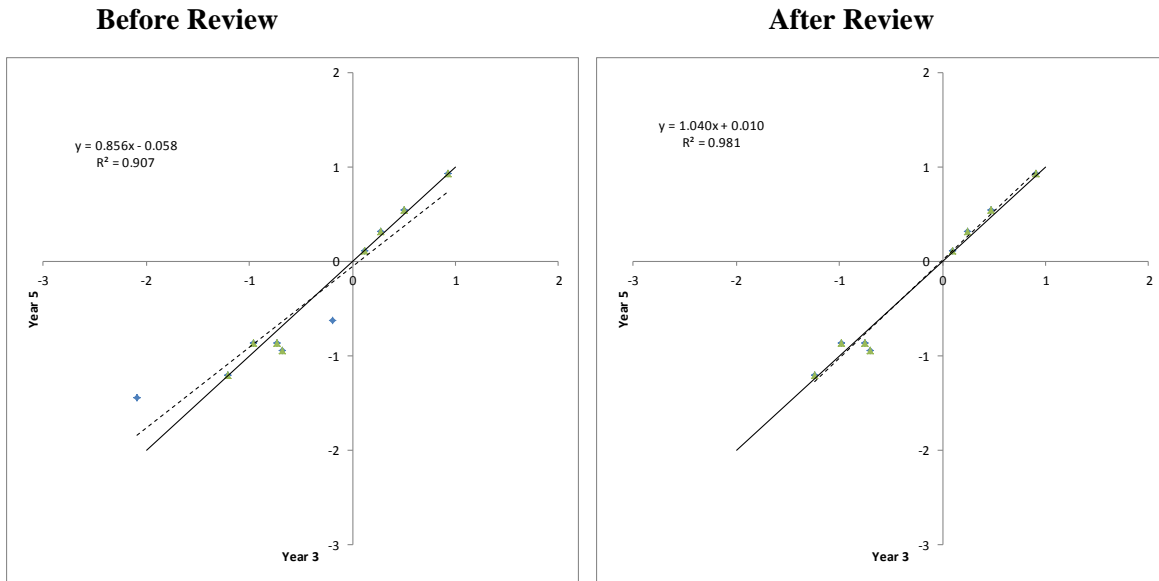


Figure 6.24. Links review for grammar and punctuation Year 3 and Year 5.

Grammar and Punctuation – Year 5/Year 7

Figure 6.25 shows the bivariate locations of the Year 5/Year 7 grammar and punctuation link items before and after review. Two items were omitted based on high and low discrimination that tended to distort the shift in the predicted direction. Both items would have been omitted on the basis of DIF anyway.

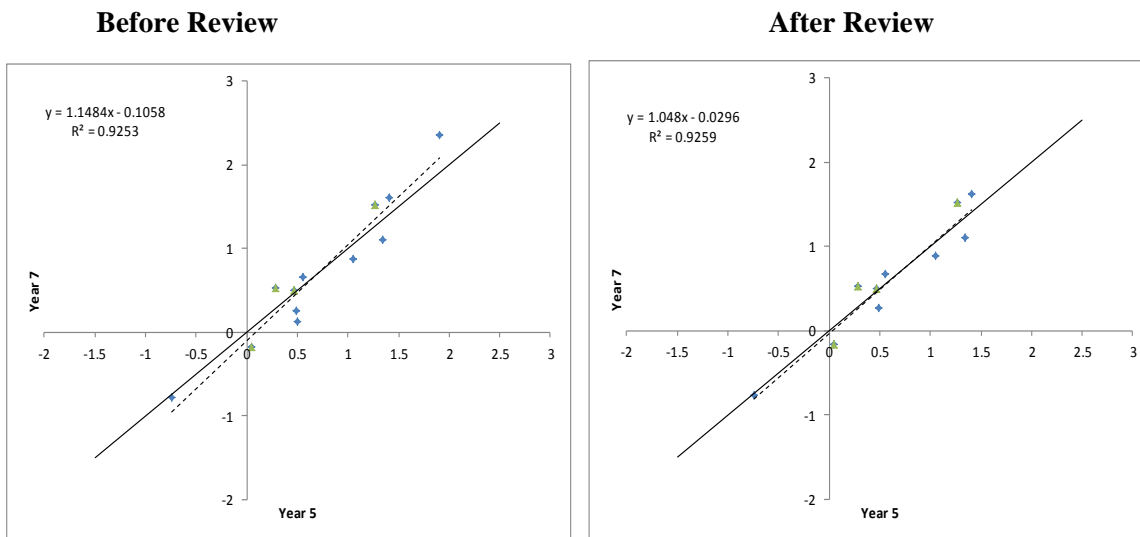


Figure 6.25. Links review for grammar and punctuation Year 5 and Year 7.

Grammar and Punctuation – Year 7/Year 9

Figure 6.26 shows the scatterplots for Year 7/Year 9 vertical links before and after review. Two items were omitted due to the effects of item discrimination on the shift and two items were omitted due to DIF.

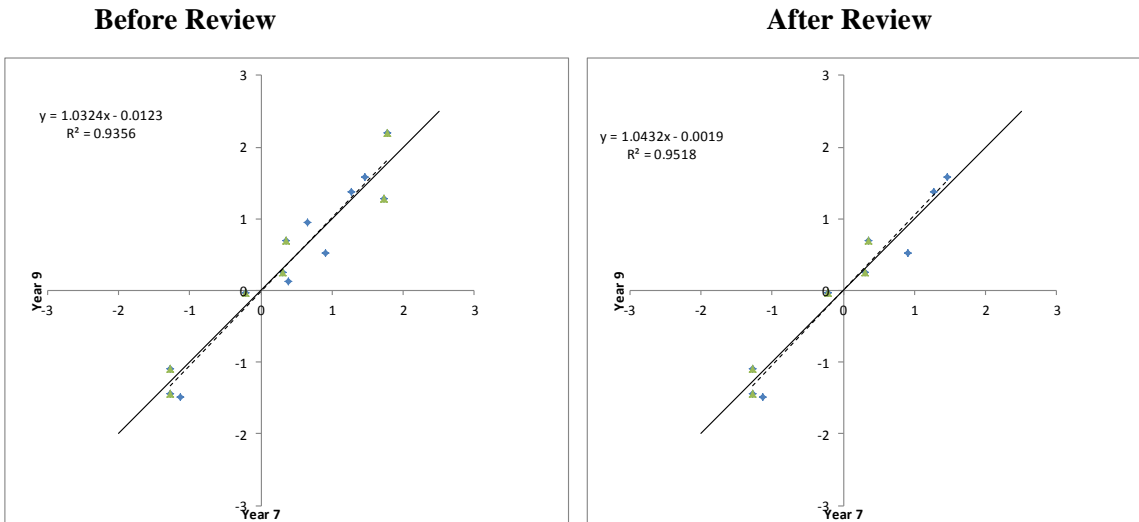


Figure 6.26. Links review for grammar and punctuation Year 7 and Year 9.

Vertical Equating of 2013 Numeracy Tests

The quality of the 2013 numeracy vertical links was generally high.

Numeracy – Year 3/Year 5

Figure 6.27 shows the scatterplots for Year 3/ Year 5 vertical links for numeracy before and after review. There were 11 common items in the Year 3 and Year 5 numeracy tests. Two items were omitted because of low discrimination that affected the shift in the predicted direction to a sufficient degree; one item with extremely high discrimination was omitted due to its impact on the shift.

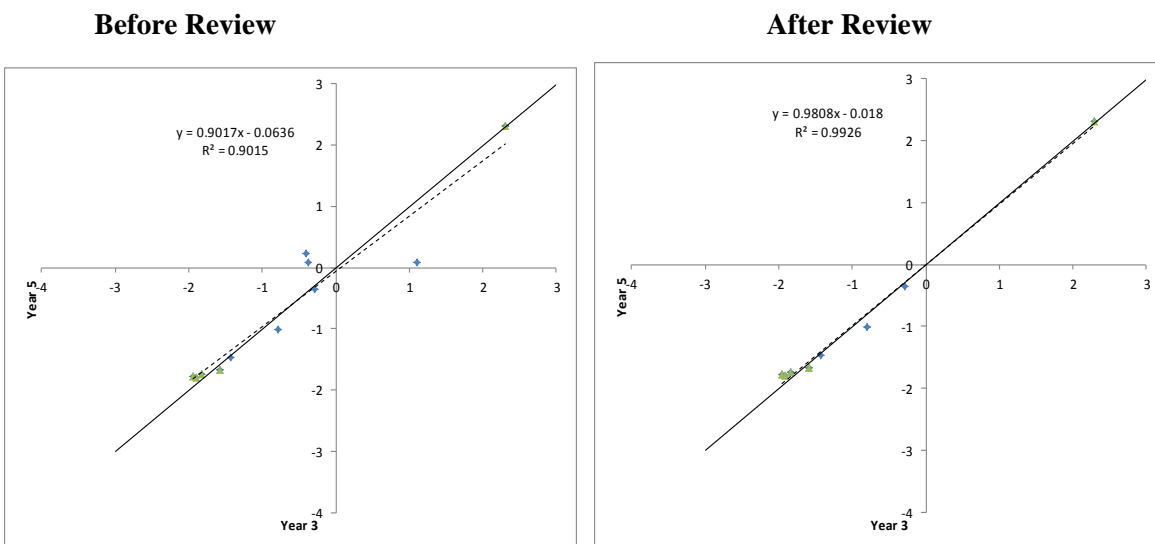


Figure 6.27. Links review for numeracy Year 3 and Year 5

Numeracy – Year 5/Year 7

Figure 6.28 shows the scatterplot before and after review for numeracy Year 5 and 7. A strong correspondence with the identity line can be seen after the omission of links. Two items were omitted due to the effects of item discrimination on the shift constant and one item was omitted due to substantial cross year-level DIF.

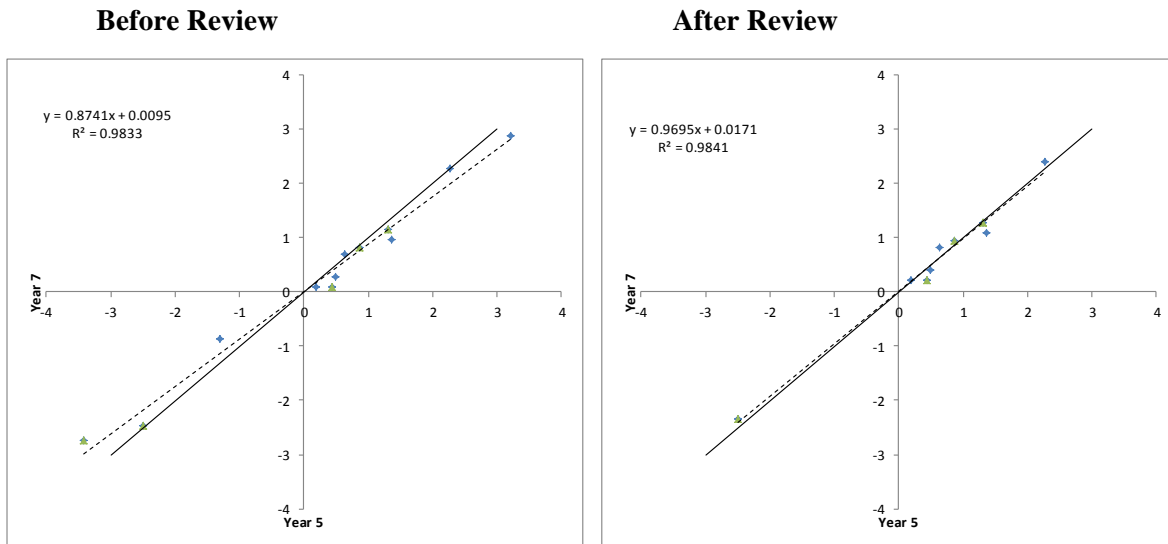


Figure 6.28. Links review for numeracy Year 5 and Year 7.

Numeracy – Year 7/Year 9

It can be seen in Figure 6.29 that the items provided a strong basis for vertical equating of the NAPLAN 2013 Year 7 and Year 9 numeracy tests. Three items were omitted due to the effects of high or low discrimination on the shift and two further items were omitted because of DIF that exceeded the criterion levels.

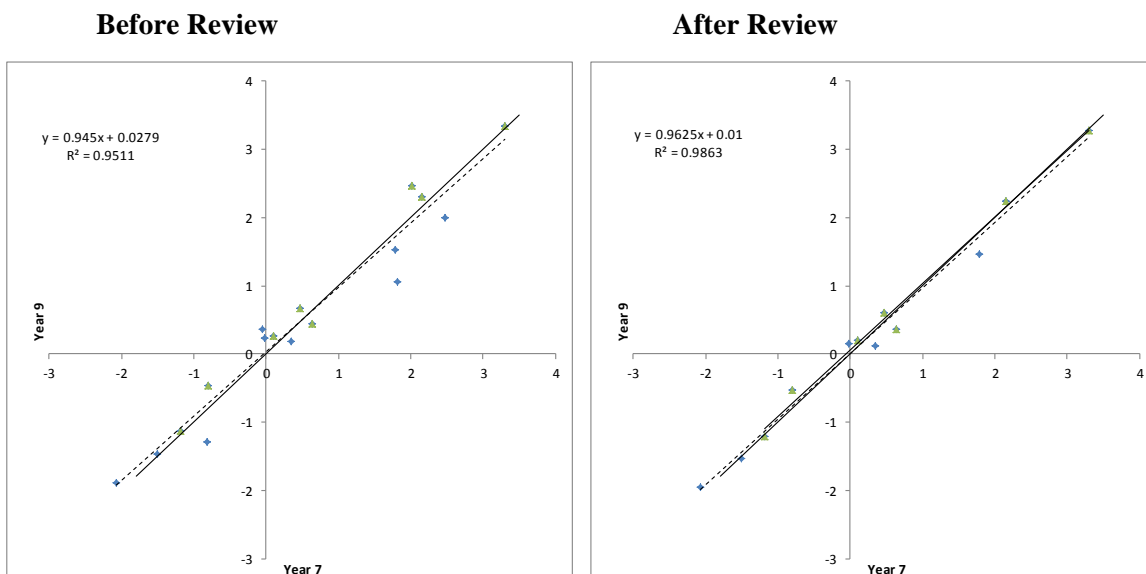


Figure 6.29. Links review for numeracy Year 7 and Year 9.

The numbers of the vertical links used and retained for each adjacent pair of year levels are shown in Table 6.2. Appendix L presents the 2013 item locations (i.e., Rasch difficulty parameters), standard errors, infit mean square statistics, item facilities, and item discriminations by domain for each adjacent pair of year levels.

Table 6.2. Vertical Link Review Summary

Domain	Years 3 / 5		Years 5 / 7		Years 7 / 9	
	No. Links Retained	Total No. of Links	No. Links Retained	Total No. of Links	No. Links Retained	Total No. of Links
Reading	8	12	8	13	9	13
Spelling	7	11	7	11	11	14
Grammar & Punctuation	8	10	10	12	9	13
Numeracy	8	11	9	12	12	17

Summary of Vertical Equating of NAPLAN 2013 Tests

The mean shifts between two adjacent year levels for each of the four domains are shown in Table 6.3. Year 5 is used as the reference to which other years are vertically equated as in previous administrations of the program.

Table 6.3. Vertical Shift Constants

Shift	Reading	Spelling	Grammar & Punctuation	Numeracy
Year 3 to 5	-0.942	-2.091	-0.702	-1.383
Year 5 to 5	0.000	0.000	0.000	0.000
Year 7 to 5	0.909	1.704	0.812	1.036
Year 9 to 5	1.456	2.500	1.045	1.773

The final locations of the 2013 tests on each of the NAPLAN domain scales were determined by taking both of the horizontal equating results and the vertical equating results into consideration. The procedure and results are described in Section 6.4.

6.4 Comparing and Combining Results of Horizontal and Vertical Equating

The horizontal equating provides one basis for placing the 2013 NAPLAN tests on the vertical scale for each domain, albeit in an indirect manner. The reason for this is that the four 2013 tests in each domain were vertically equated based on the vertical scale, established in 2008, through common-item vertical equating of the 2008 tests. The equating forms were first used in 2009.

It is important to check the common-item vertical equating against the original 2008 common-item vertical equating. Figure 6.1 depicts the horizontal and vertical equating diagrammatically. Each year-group can be equated directly through the horizontal equating. In principle, each year level could also be placed on the historical scale indirectly through vertical equating with the adjacent year level and horizontal equating through that adjacent year level. For example, the Year 3 NAPLAN 2013 test can be equated with the Year 5 NAPLAN 2013 test, and then placed on the historical scale through the Year 5 equating form. The latter process is referred to here as *indirect* equating. The regression-based equating plots to follow indicate where there is some divergence.

Ideally, any case of divergence between direct and indirect equating would be resolved to the degree possible through checking each specific component of the linking process.

The equating process that has been used in previous years of NAPLAN is designed to take into consideration both vertical equating and the horizontal equating. This process was used again to establish final locations of the 2013 reading, spelling, grammar and punctuation, and numeracy tests on the NAPLAN reporting scales.

In this section, the results of the horizontal equating based on the equating sample are compared with the 2013 vertical equating results based on the 2013 calibration sample for each domain. Specifically, the vertical and horizontal shift constants are plotted for each of the four year-level tests in each domain.

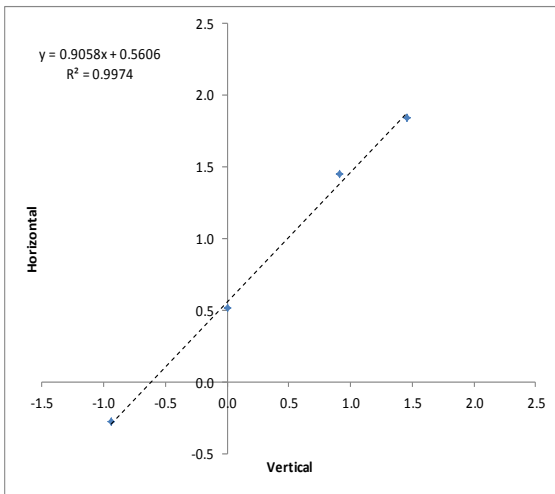
Figure 6.30 shows plots of the horizontal shifts for the 2013 tests (vertical axes) against the vertical shifts (horizontal axes). The latter are based on the common-item vertical equating and delta-centered at Year 5. Because each test is calibrated so that the mean item location is 0 (delta-

centered), the mean item parameters after equating will be equal to the shifts. The dotted line is the regression line based on the four tests in each domain. The regression equation and *R*-square are shown at the top-left corner of each plot. There is one plot per domain.

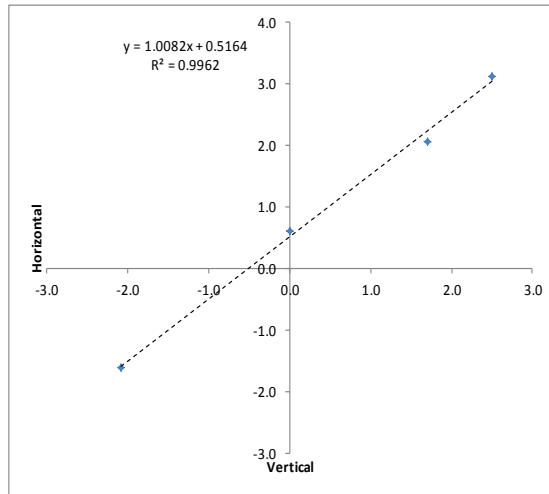
Ideally, each regression line would have a slope of 1.0 and pass through all four points, showing perfect correspondence of the two methods. It can be seen from the plots that this is not always the case. There is, to some degree, a re-setting of the vertical scale when the regression slopes deviate from 1.0.

To date, scaling factors have been employed that assume the population standard deviation remains the same over time: the scaling factors applied to date make the standard deviations of the populations equal by definition. The scaling factors applied to the final scale are not applied at the point of vertical or horizontal equating. Consequently, there may be differences between the locations used for reporting and the locations used for equating. The differences between the two sets of locations increase as the scaling factor increases above 1. The grammar and punctuation scaling factors have often been smaller than 1 in previous years of NAPLAN. This could reflect a greater spread of the scale due to a systematic increase in the discriminations of items on the tests.

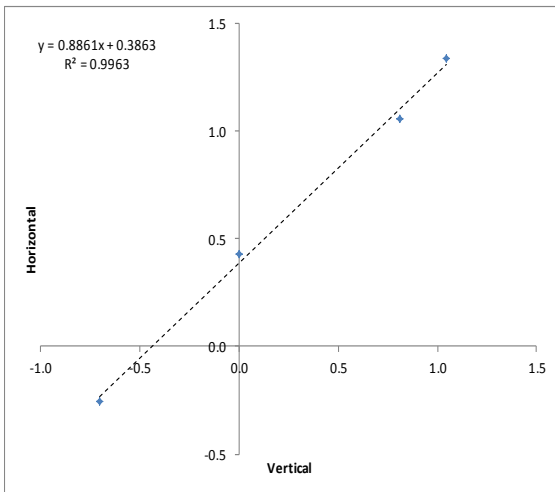
2013 Reading Tests



2013 Spelling Tests



2013 Grammar & Punctuation Tests



2013 Numeracy Tests

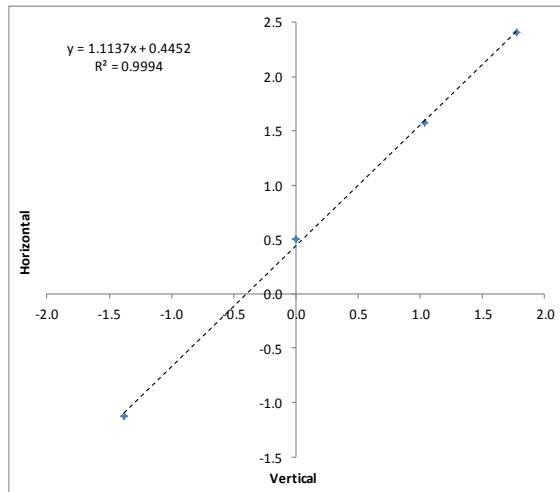


Figure 6.30. Regression-based combination of vertical and horizontal equating shifts.

Table 6.4 displays the intercepts and slopes for the regression-based combination of the vertical and horizontal equating.

Table 6.4. Regression Intercepts and Slopes

Regression Coefficient	Reading	Spelling	Grammar & Punctuation	Numeracy
Intercept	0.561	0.516	0.386	0.445
Slope	0.906	1.008	0.886	1.114

As in previous years, the final shifts were calculated using the regression lines of best fit

$$y = a + b \cdot x \quad (6.1)$$

where y is the final shift onto the NAPLAN scale; x is the vertical, Year-5 centred shift; b is the regression slope; and a is the regression intercept.

The final, regression-based shifts for each domain calculated using Equation 6.1 are shown in Table 6.5 by year level.

Table 6.5. Final Shifts Applied for Equating NAPLAN 2013 onto the NAPLAN 2008 Scale

Year Level	Reading	Spelling	Grammar & Punctuation	Numeracy
3	-0.292	-1.592	-0.236	-1.095
5	0.561	0.516	0.386	0.445
7	1.384	2.235	1.106	1.599
9	1.880	3.037	1.312	2.419

6.5 Calibration and Scaling of Persuasive Writing

Background

In 2013 a persuasive writing task was administered for the third time as part of NAPLAN. The rating of NAPLAN 2013 writing was based on the same 10 criteria and the same marking guide used for the writing tests in 2011 and 2012.

Raw score summary

Tables 6.6 present the distributions of raw scores by year level for both calibration sample and census data, which indicate that the distributions of raw scores were very similar across 2011, 2012 and 2013.

Table 6.6. NAPLAN 2011—2013 Persuasive Writing Raw Score Distribution by Year Level

Persuasive Writing	Year Level	Number of Students	Mean	Standard Deviation
Sample 2011	3	1066	18.14	5.08
	5	1131	23.56	5.90
	7	2510	26.95	7.05
	9	2401	30.31	8.10
Full Cohort 2011	3	252901	19.42	5.12
	5	258563	24.74	5.79
	7	261475	28.67	6.53
	9	244772	31.97	7.54
Sample 2012	3	10487	18.73	5.15
	5	9644	23.70	5.71
	7	20751	27.56	6.45
	9	29151	30.60	7.45
Full Cohort 2012	3	259654	19.43	4.96
	5	240421	24.28	5.58
	7	263986	27.72	6.36
	9	253924	30.76	7.46
Sample 2013	3	10178	18.83	5.31
	5	10008	23.80	5.97
	7	19321	27.53	6.64
	9	30230	30.69	7.61
Full Cohort 2013	3	262679	19.43	5.25
	5	258562	24.35	5.68
	7	261373	27.60	6.45
	9	254470	30.76	7.66

Equating Methodologies

The equating study design used for persuasive writing in the NAPLAN 2013 assessment was the same as that used in 2009 and 2010 to equate narrative writing and to equate 2012 and 2011 persuasive writing.

The purpose of the equating exercise was to determine the transformation constant required to equate the 2013 and 2011 NAPLAN persuasive writing scales. In the pairwise equating study, judges compared (i) 2011 scripts with other 2011 scripts, (ii) 2013 scripts with other 2013 scripts, and (iii) 2011 scripts with 2013 scripts. The Bradley-Terry-Luce (BTL) model was applied to the pairwise judgements by markers to calibrate a pairwise equating scale to scale both the 2011 and 2013 equating scripts together.

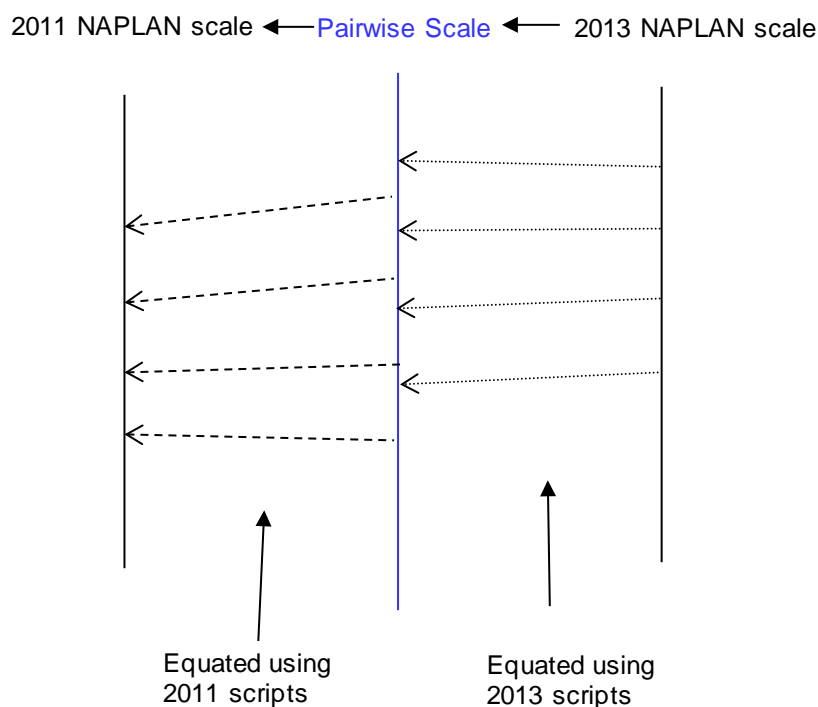


Figure 6.31. A schematic of the pairwise equating process used for Persuasive Writing.

Figure 6.31 is a schematic representation of the steps involved in the equating process. Both the 2011 and 2013 scripts used in the equating study have locations on the pairwise equating scale. The correspondences of the locations for four scripts from each year are shown for the purpose of illustration. In total, 178 scripts from 2011 were compared with other scripts and 215 scripts from 2013 were compared with other scripts. In 2013, markers judged each comparison with respect to two criteria, referred to as Authorial Choices and Conventions. This meant significantly more comparisons per script than in previous years.

Figure 6.32 shows the plot of pairwise scale locations (x -axis) against locations based on the rubrics (y -axis). The correlation overall is approximately $r = 0.955$. In the plot, persuasive writing 2011 and persuasive writing 2013 are highlighted separately. Regression lines are shown separately for each of these years. It can be seen that there is a very similar correspondence between the pairwise and NAPLAN scale locations for 2011 and 2013 scripts. The pairwise scale locations show the

ordering of the scripts based on direct comparisons whereas the NAPLAN scale locations are based on marking. The scatterplot indicates there is no need to shift the persuasive writing 2013 scale up or down to equate to the 2011 scale according to the equating process depicted by the schematic in Figure 6.31.

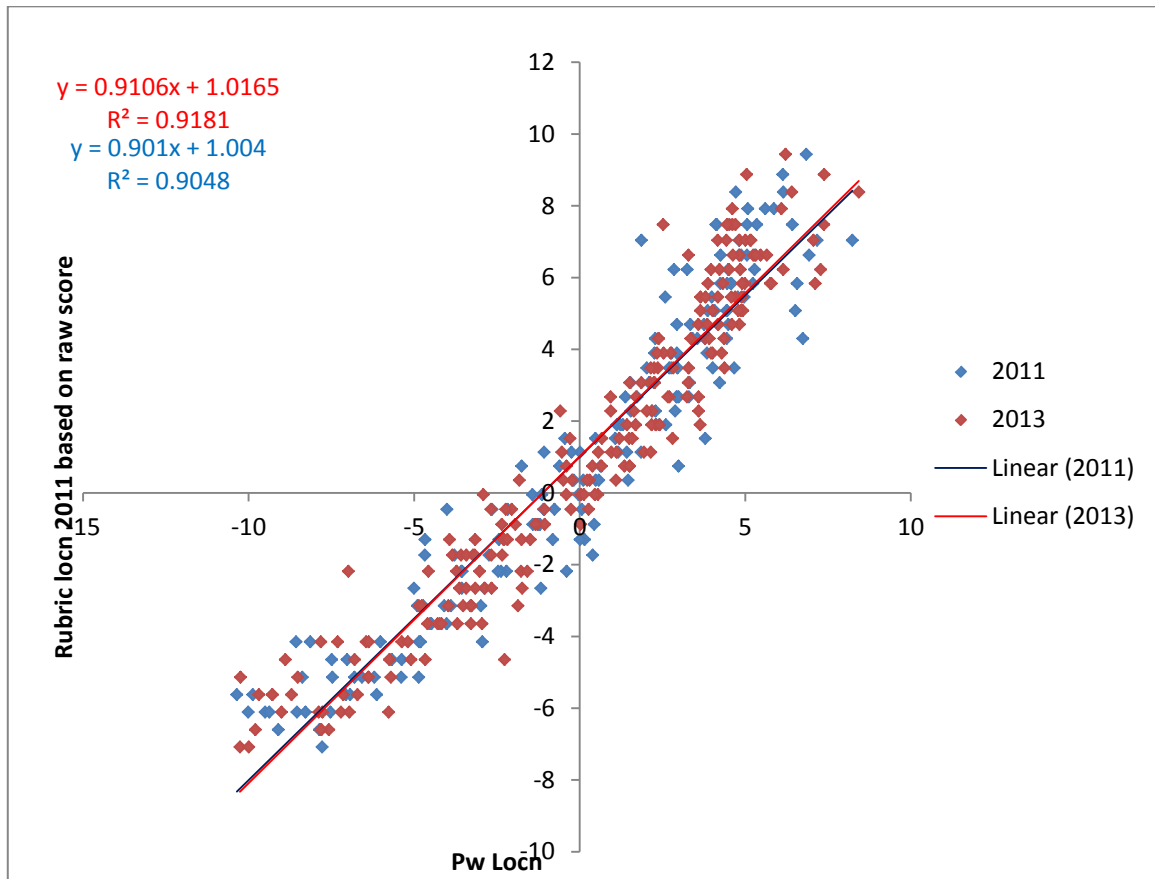


Figure 6.32. Initial scatterplot of the NAPLAN and pairwise scale locations.

6.6 Determining the Transformation Constant

The transformation was obtained by the steps outlined to follow. The process is the same as that used in 2012.

A new calibration of the 2013 writing data was carried out to produce deltas/thresholds and a raw-score to logit correspondence tables. It was confirmed that there was a linear relationship between the logits in 2011 and 2013. The first step in the equating process was to provisionally treat the raw-score to logit correspondence as being the same in 2013 as in 2011. The 2013 rubric was the same as the 2011 rubric and training procedures and exemplars were kept as consistent as possible, with the objective of avoiding the need to equate the tests. However, the horizontal equating shift was conducted to check whether it was necessary to equate the tests.

Although the scales are provisionally treated as being the same, the objective is to determine a new set of logit equivalents

$$\hat{\theta}_r^{(13)} = \alpha \hat{\theta}_r^{(11)} + c \quad (6.2)$$

where $\hat{\theta}_r^{(13)}$ is the NAPLAN scale location for a raw score of r on the 2013 (un-equated) writing scale, $\hat{\theta}_r^{(11)}$ is the NAPLAN scale location for a raw score of r on the 2011 writing scale, and a and c are constants.

Once decisions had been made about which comparisons to retain, the transformation was determined as follows. In the notation used, the subscript denotes the year and script number, while the superscript denotes the scale (unit and origin) in terms of which the parameters are expressed.

First, let $\hat{\theta}_i^{(N)}$ be the location of script number i on the 2011 NAPLAN persuasive writing scale, given the raw score of the script i (i.e. using the same correspondence as in 2011). The same correspondence was used for both 2011 and 2013 scripts on the preliminary assumption that no equating shift is required. The purpose of the equating process is to determine any shift that is required.

Next, let $\hat{\theta}_i^{(P)}$ be the location of script number i on the pairwise scale.

The difference between the mean locations of the 2011 and 2013 scripts was determined on:

- (a) the NAPLAN persuasive writing scale based on the raw scores; and
- (b) the pairwise equating scale.

The ratios of the standard deviations $\sigma_{\hat{\theta}}^{(N)} / \sigma_{\hat{\theta}}^{(P)}$ were 0.947 and 0.950 calculated from the 2011 and 2013 scripts, respectively. The ratio of these ratios of standard deviations is 1.003. It has been agreed for the NAPLAN program that a ratio of less than 1.10 is considered acceptable for equating (see Huynh & Meyer, 2010) and, accordingly, that no transformation constant is required to equate the units of the 2011 and 2013 NAPLAN persuasive writing scales.

The means of the 2011 and 2013 scripts in the second column of Table 6.7 are obtained from the same pairwise scale with the same origin. The means in the last column of Table 6.7 are the means in the first column expressed in the unit of the 2011 NAPLAN scale; i.e., $\bar{\theta}^{(P \rightarrow N)} = \bar{\theta}^{(P)} \times c$, where c is the ratio of standard deviations. The same transformation was made for 2011 and 2013 because the ratios of the standard deviations are nearly equal as reported above.

On the provisional assumption that no equating is required, we would expect the difference between the means when translated from the pairwise scale onto the NAPLAN scale to be the same as the difference between the means on the NAPLAN scale (where the latter locations are inferred from raw scores).

Table 6.7 shows the differences (bottom row, last and third last columns) differ only slightly.

Table 6.7 The Means and Standard Deviations of 2011 and 2013 Scripts on the Scales

Year	$\bar{\theta}^{(P)}$	$\sigma_{\hat{\theta}}^{(P)}$	$\bar{\theta}^{(N)}$	$\sigma_{\hat{\theta}}^{(N)}$	$\bar{\theta}^{(P \rightarrow N)}$
2011	-0.007	4.558	0.998	4.317	-0.006
2013	0.065	4.552	1.076	4.297	0.007
Difference	-0.072		-0.078		-0.014

Specifically,

$$\bar{\theta}_{11}^{(N)} - \bar{\theta}_{13}^{(N)} = \bar{\theta}_{11}^{(P \rightarrow N)} - \bar{\theta}_{13}^{(P \rightarrow N)} - 0.064 \quad (6.3)$$

New 2013 NAPLAN locations are required such that the means are equated as follows:

$$\bar{\theta}_{11}^{(N)} - \bar{\theta}_{13r}^{*(N)} = \bar{\theta}_{11}^{(P \rightarrow N)} - \bar{\theta}_{13}^{(P \rightarrow N)}, \quad (6.4)$$

where $\bar{\theta}_{13r}^{*(N)}$ is the new 2013 NAPLAN location for a raw score r (that is, it replaces the provisional location based on the original arbitrary choice of unit and origin). Thus, the required transformation formula is

$$\bar{\theta}_{13r}^{*(N)} = \bar{\theta}_{13r}^{(N)} + 0.064. \quad (6.5)$$

6.7 Testing the Magnitude of the Translation Constant

Because the magnitude of the translation constant is small, a test was applied to determine whether its size differs significantly from zero as in previous years of NAPLAN. That is, a test was applied to test whether a translation constant of \hat{d} is justified or required. For this purpose, the means of all scripts were used to equate the pairwise and NAPLAN scales.

Assuming the differences between estimates on the pairwise and NAPLAN scales represent samples from populations of normally distributed differences, we can obtain the standard errors of the mean differences from $SE(\bar{\theta}_{13}^{(N)} - \bar{\theta}_{13}^{(P \rightarrow N)}) = SD(\theta_{13}^{(N)} - \theta_{13}^{(P \rightarrow N)}) / N$ and $SE(\bar{\theta}_{11}^{(N)} - \bar{\theta}_{11}^{(P \rightarrow N)}) = SD(\theta_{11}^{(N)} - \theta_{11}^{(P \rightarrow N)}) / N$.

The standard error of the difference given in Equation (6.5) is then estimated as

$$SE_{\hat{d}} = \sqrt{SE^2(\bar{\theta}_{13}^{(N)} - \bar{\theta}_{13}^{(P \rightarrow N)}) + SE^2(\bar{\theta}_{11}^{(N)} - \bar{\theta}_{11}^{(P \rightarrow N)})} = 0.125. \quad (6.6)$$

Because the estimated translation constant is the difference between the mean differences, we can obtain a t -value using the standard errors of the differences. We obtain $t(391) = 0.064/0.125 = 0.511$, clearly within expected limits of a value of 0 ($p = 0.610$). Because the marking guide is the same it is reasonable to apply this test to determine whether a translation constant should be applied.

Given the result of the test, it was recommended that no translation constant need be applied to equate the 2013 and 2011 NAPLAN persuasive writing scales.

6.8 Estimating Standard Errors of Equating

Multiple steps were involved in the equating of reading, spelling, grammar and punctuation, and numeracy, with estimating errors associated with each step. A standard error was estimated for each step. The standard errors were combined on the assumption that the errors from the steps are independent.

The errors considered in the equating processes over the course of the program are shown in Figure 6.33.

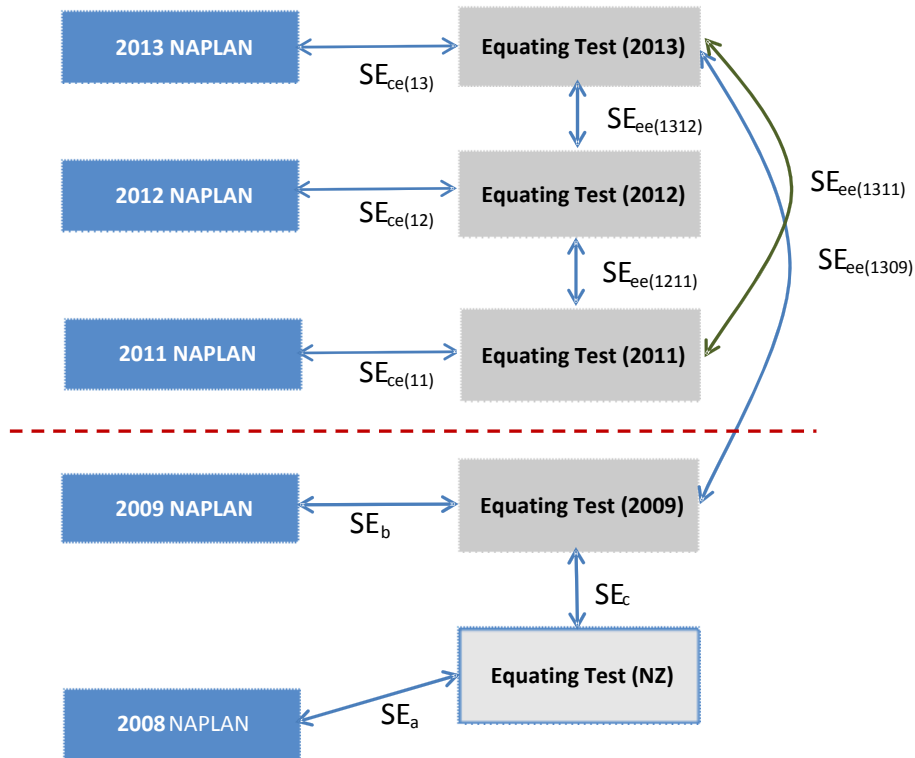


Figure 6.33. A schematic of the equating errors accumulated across NAPLAN administrations.

For each domain and year level:

- SE_a is the standard error associated with equating the offshore equating form and the 2008 NAPLAN test;
- SE_b is the standard error associated with equating the onshore equating form and the 2009 NAPLAN test;
- SE_c is the standard error associated with equating the offshore and onshore equating forms;
- SE_{ce(10)} is the standard error associated with equating the NAPLAN 2010 calibration with the equating test (calibration to equating);
- SE_{ce(11)} is the error associated with equating the NAPLAN 2011 calibration with the equating test; and
- SE_{ee(1110)} is the standard error associated with equating the 2011 and 2010 administrations of the equating test (equating to equating); and so forth

The equating errors for equating of the 2013 scale to the 2011 and 2008 scales are estimated by combining the relevant standard errors as follows:

$$SE_{2013 \text{ to } 2011} = \sqrt{SE_{ce(11)}^2 + SE_{ce(13)}^2 + SE_{ce(1311)}^2} \quad (6.7)$$

$$SE_{2013 \text{ to } 2008} = \sqrt{SE_a^2 + SE_c^2 + SE_{ce(1309)}^2 + SE_{ce(13)}^2} \quad (6.8)$$

It was decided in 2011 to include component *c* of equating error, associated with the offshore testing, in equating back to 2008. The reason is that even though most items are in common with the equating form in 2009 and subsequent years, a different population of persons attempted the items in the offshore equating exercise. Component *c* was included again in 2013.

Table 6.8 shows the standard errors of equating associated with each test domain and year level in logits.

Table 6.8. Standard Errors of Equating

Domain	Year Level	Equating Error	
		2013 to Base Year*	2013 to 2012
Grammar & Punctuation	3	0.086	0.061
	5	0.099	0.049
	7	0.090	0.042
	9	0.079	0.050
Numeracy	3	0.071	0.052
	5	0.070	0.042
	7	0.050	0.034
	9	0.050	0.033
Reading	3	0.061	0.043
	5	0.057	0.045
	7	0.050	0.037
	9	0.049	0.039
Spelling	3	0.091	0.070
	5	0.099	0.061
	7	0.091	0.051
	9	0.095	0.046
Writing	All Years	0.125	0.184

* Base year for grammar & punctuation, numeracy, reading and spelling was 2008; base year for persuasive writing was 2011.

The equating errors were taken into account, together with sampling and measurement errors, in estimating the standard errors used to determine statistical significance in the comparisons between mean scores across years in NAPLAN Summary and National Reports. The equating errors were not included when estimating standard errors of estimates used to determine statistical significance in the comparisons between mean scores of different subgroups on NAPLAN 2013. In estimating standard errors for percentages at or above minimum standards, the equating errors were applied to the cut-points for proficiency bands.

CHAPTER 7. REPORTING OF NAPLAN PERFORMANCE IN 2013

NAPLAN 2013 achievement scores for reading, numeracy, spelling, and grammar and punctuation were reported on the NAPLAN vertical scales as they were for NAPLAN administrations 2008 through 2012, while the NAPLAN 2013 achievement scores in persuasive writing used the same scale as the 2011 and 2012 assessments. This was made possible by applying the equating shifts and scale transformations necessary to bring the 2013 logit scores for each test in each domain onto the NAPLAN reporting scale, the details of which are reported in previous chapters. Student results were again reported against proficiency bands as in previous years. The cut-points for proficiency bands established for NAPLAN 2008 reporting were used for NAPLAN 2013. The scale equating enabled achievement scores to be compared across NAPLAN administration years for reading, numeracy, spelling, and grammar and punctuation, and across 2011, 2012 and 2013 for persuasive writing.

7.1 Proficiency Estimates

As for the previous years, population statistics for reporting of NAPLAN 2013 at the state/territory and national levels were estimated using multiple imputation techniques. Using plausible value methodology to obtain proficiency estimates for populations and subpopulations is a standard approach in large scale national assessment programs, as well as in international assessment programs such as the Programme for International Student Assessment (PISA). An introduction to the conceptual basis of plausible values and calculations involving them in the context of PISA is described in a report from the Organisation for Economic Co-operation and Development (OECD, 2009).

Five plausible values were drawn for each student in each domain using *ACER ConQuest*. The plausible values for reading, spelling, grammar and punctuation, and numeracy were drawn concurrently, based on a multidimensional item response model. In drawing the plausible values, conditioning variables were used. The inclusion of conditioning variables in the estimation increases the precision of estimates and allows the analysis of relationships between proficiency estimates and background variables. The background variables used in 2012 were also used in 2013: gender, LBOTE status, Indigenous status, parental education, parental occupation, school geolocation, school sector and school reading WLE average score. Due to differences between states/territories with respect to the distributions of students across these variables, some categories of these conditioning variables may not have been observed or may have been perfectly correlated with other conditioning variables. For example, in year level 3 the indicator for school geolocation indicating whether this information was missing was perfectly correlated with school sector indicator home-schooled students. In these cases, categories of conditioning variables were combined or conditioning variables were removed from the generation of plausible values for the state/territory in question. A diagrammatic representation of the model is shown in Figure 7.1.

The plausible values were drawn separately for each jurisdiction to allow for the possibility of different relationships between proficiency estimates and conditioning variables across the jurisdictions. Plausible values were drawn for all students, including the absent students and the withdrawn students. Plausible values are not suitable for reporting individual student performance as they are random draws from the latent distributions. Instead, WLEs are used when reporting to individual students.

The plausible values for writing were drawn in a separate calibration for each state/territory. In this calibration, school sector, gender, LBOTE status, Indigenous status, parental education, parent

occupation, school geolocation, year level and the school writing WLE average score were included as conditioning variables.

The five sets of plausible values were used to calculate means, standard deviations, percentiles and percentages of students within proficiency bands, for each domain and each year level at the jurisdictional and national level. These calculations include the absent and withdrawn students but not the exempt students. The statistics were calculated for the full cohort and for subgroups. The five sets of plausible values were also used to obtain estimations of measurement errors.

Estimates of sampling and measurement errors were combined to obtain final standard errors for the performance statistics reported for the census data. The standard errors were used to determine statistical significance of mean differences and percentage differences in NAPLAN 2013 performance in the reports. Relevant equating errors were taken into consideration, in addition to sampling and measurement errors, to estimate standard errors and evaluate statistical significance of mean and percentage differences between 2013 and 2012, and between 2013 and 2008 for reading, numeracy, spelling, and grammar and punctuation, and between 2013 and 2012, and between 2013 and 2011 for persuasive writing.

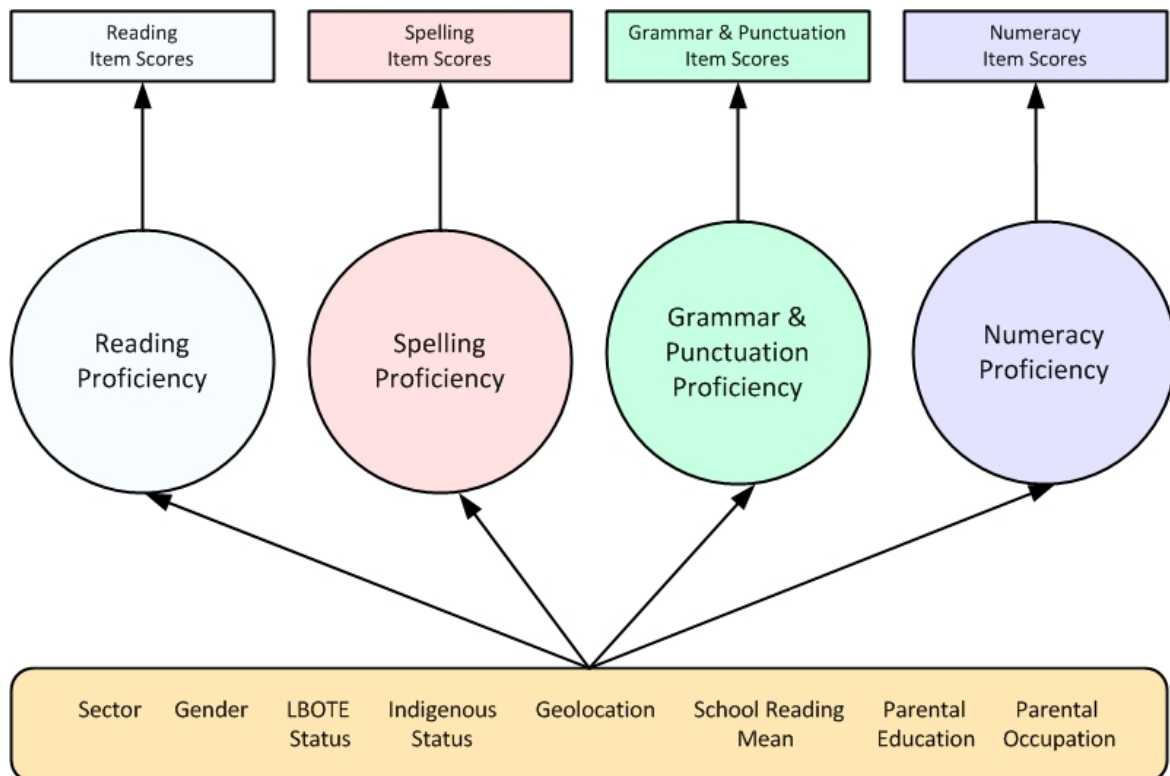


Figure 7.1. Multidimensional item response model with conditioning variables.

7.2 Reporting NAPLAN 2013 Student Achievement on NAPLAN Reporting Scales

The plausible values were drawn on the delta-centred scale for each test. Before the scaling was finalised, the 2013 latent distributions of student achievement were estimated using the plausible values drawn for the 2013 calibration sample, with the student weights applied. The means and standard deviations calculated from the sample provided estimates of the population latent distributions before the full cohort data were available. The standard deviations obtained were then compared to the 2012 population standard deviations. The ratio of the 2012 standard deviation to

the 2013 standard deviation was calculated for each domain, at each year level. A ratio that was greater than 1.0 indicated that the 2012 test spread the students out more than the 2013 test did for that domain at the particular year level. Conversely, a ratio that was less than 1.0 indicated that the 2013 test spread the students out more than the 2012 test for that domain at that particular year level. These ratios of standard deviations were then used as scaling factors to correct for the different standard deviations.

For each domain at each year level, a linear transformation was applied to scores on the delta-centred logit scale to correct for the spread in the scores and to apply the appropriate equating constant to put the scores onto the NAPLAN vertical domain logit scale. The scaling factor was applied for each domain at each year level, with the estimated population mean as the centre of transformation.

For each domain at each year level, a logit score was transformed as follows:

$$\textit{TransformedLogitScore} = SF \cdot (\textit{LogitScore} - \textit{LocalMean}) + \textit{LocalMean} + \textit{EqShift} \quad (7.1)$$

where

LocalMean = the mean of the latent distribution estimated using the 2013 calibration sample based on the delta-centred item parameters,

SF = the scale factor that was calculated from the ratio of the 2012 standard deviation to the 2013 standard deviation.

EqShift = the equating constant pertinent for the domain at the particular year level.

The values for *LocalMean*, *SF*, and *EqShift* are presented in Table 7.1 for each year level by domain.

The same transformation was applied to the WLE ability logit scores in the score-equivalence table, the item parameters and the plausible values. For persuasive writing, the scaling factor and equating shifts were set to one and zero, respectively, in Table 7.1.

Table 7.1. Parameters for transforming the 2013 logit scores to the NAPLAN Scales

Year	Domain	Local Mean	Scaling Factor	Equating Shift
Year 3	Reading	0.3006	1.1096	-0.2923
	Persuasive Writing	—*	1.0000	0.0000
	Spelling	0.2648	0.9374	-1.5921
	Grammar and Punctuation	0.5391	1.1605	-0.2358
	Numeracy	0.2485	1.0105	-1.0952
Year 5	Reading	0.6332	0.8793	0.5606
	Persuasive Writing	—*	1.0000	0.0000
	Spelling	0.2637	0.8985	0.5164
	Grammar and Punctuation	0.8508	0.8917	0.3863
	Numeracy	0.1245	1.0628	0.4452
Year 7	Reading	0.3793	1.0782	1.3843
	Persuasive Writing	—*	1.0000	0.0000
	Spelling	-0.0092	1.0057	2.2348
	Grammar and Punctuation	0.6138	1.1097	1.1058
	Numeracy	-0.0798	0.9968	1.5990
Year 9	Reading	0.4961	0.9529	1.8798
	Persuasive Writing	—*	1.0000	0.0000
	Spelling	0.0954	0.9716	3.0366
	Grammar and Punctuation	0.9501	1.0756	1.3121
	Numeracy	-0.1971	1.0754	2.4193

*Not applicable.

For each domain, estimates in logits were transformed to the NAPLAN reporting scale scores established in NAPLAN 2008 as follows:

$$NAPLANScaleScore = 100 \cdot (Score_{logit} - DomainMean) / (DomainStdDeviation) + 500 \quad (7.2)$$

where *DomainMean* and *DomainStdDeviation* are the estimated overall domain mean and overall domain standard deviation calculated using the 2008 calibration sample. These are presented in Table 7.2.

Table 7.2. Domain Mean and Standard Deviation for Transforming Logits to NAPLAN Scale Scores

Domain	Domain Mean	Domain SD
Reading	1.1629	1.4867
Writing	1.1160	3.3679
Spelling	0.9406	2.6241
Grammar and Punctuation	1.2529	1.3605
Numeracy	0.8102	1.6652

For each domain, the standard error (SE) in logits associated with each WLE estimate was transformed to the NAPLAN scale metric as follows:

$$SE_{NAPLANScale} = 100 \cdot \frac{SE_{logit}}{DomainStdDeviation} \quad (7.3)$$

7.3 Score Equivalence Tables

To facilitate rapid generation of student and school reports, score equivalence tables for converting raw scores to weighted likelihood estimates (WLEs) and their corresponding NAPLAN scale scores were generated for each test and provided to the jurisdictions' Test Administration Authorities. The equivalence tables enable the TAAs to locate individual students on NAPLAN reporting scales using the raw scores for each test. The NAPLAN 2013 score equivalence tables are presented in Appendix K. The tables show the scores and the associated standard errors in logits and in NAPLAN scale scores. For Year 7 and Year 9 numeracy, three separate tables were provided. The first was for the overall numeracy test, the second for the non-calculator form and the third for the calculator form. The second and third tables were for allocating scores to students who sat only one of the forms.

The preliminary national mean, the 20th percentile score and the 80th percentile score (to give the approximate range of the middle 60 percent) based on the calibration sample were provided for each domain and year level for reporting to schools and parents.

7.4 Reporting against Proficiency Bands

As in previous NAPLAN administrations, student achievement was also reported against proficiency bands for each domain. The ten proficiency bands on the NAPLAN reporting scales had the cut-points set at equal intervals apart. Year 3 results were reported against Band 1 to Band 6, Year 5 results reported against Band 3 to Band 8, Year 7 results reported against Band 4 to Band 9, and Year 9 results reported against Band 5 to Band 10. The cut-points for the proficiency bands were developed in 2008 and used in reporting the NAPLAN 2013 results.

As the vertical scale for each domain is standardised, the scales for all the domains are very similar in length. Each scale has the same number of proficiency bands and the same nine cut-points on the transformed scales. The performance distribution at each year level could span approximately six bands. A student whose proficiency fell within a specific band would be expected to score at least 50% correct on a test made up of items that fell into that band.

The cut scores separating the proficiency bands are presented in Table 7.3. The cut scores are different on the logit scales for the domains but are the same on the transformed NAPLAN scales.

Table 7.3. Proficiency Bands Cut Scores

Band Cut Score	Scale Score	Logits				
		Reading	Writing	Spelling	Grammar and Punctuation	Numeracy
9/10	686	3.928	7.380	5.821	3.783	3.907
8/9	634	3.155	5.629	4.457	3.076	3.042
7/8	582	2.382	3.878	3.092	2.369	2.176
6/7	530	1.609	2.126	1.728	1.661	1.310
5/6	478	0.836	0.375	0.363	0.954	0.444
4/5	426	0.063	-1.376	-1.001	0.246	-0.422
3/4	374	-0.710	-3.128	-2.366	-0.461	-1.288
2/3	322	-1.483	-4.879	-3.730	-1.169	-2.154
1/2	270	-2.257	-6.630	-5.095	-1.876	-3.020

Figure 7.2 depicts how student results are reported against the proficiency bands. Results in each year level are reported against six bands. For Year 3, scores above Band 6 are reported against Band 6. For Year 5, scores above Band 8 are reported against Band 8 and scores below Band 3 are reported against Band 3. For Year 7, scores above Band 9 are reported against Band 9 and scores below Band 4 are reported against Band 4. For Year 9, scores below Band 5 are reported against Band 5.

The yellow band for each year level in Figure 7.2 is identified as the national minimum standard for that year level. Band 2 is the national minimum standard for Year 3, Band 4 for Year 5, Band 5 for Year 7 and Band 6 for Year 9. Students are deemed to have performed above national minimum standard if their scores fall in the green bands at their respective year level and below national minimum standard if their scores fall in the orange band.

Band	Year 3	Year 5	Year 7	Year 9
10				Green
9			Green	Green
8		Green	Green	Green
7		Green	Green	Green
6	Green	Green	Green	Yellow
5	Green	Green	Yellow	Orange
4	Green	Yellow	Orange	
3	Green	Orange		
2	Yellow			
1	Orange			

Figure 7.2. Reporting against the NAPLAN proficiency bands.

7.5 National Reports

The NAPLAN 2013 Summary Report was released in September 2013. This report provides results in each domain at each year level and by state/territory and nationally. The Summary Report was released around the same time that student reports were distributed to parents. The National Report includes subgroup results by gender, language background, Indigenous status, geolocation, parental education and parental occupation. The National Report was released in December 2013.

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Purpose

The purpose of this report is to provide information regarding the 2013 NAPLAN Calibration and Equating Samples that complements existing NAPLAN technical documentation. It should be read in conjunction with the NAPLAN Technical report and the ACER document *NAPLAN Weighting Steps dispatch.pdf*.

Sample frame

The original file used to develop the calibration and equating sample frames was based on 'ACARASampleFrame2013_23012013_2012EQSampleInformation.xlsx' provided by ACARA (24th January 2013) which contained 2012 enrolment information. Enrolment totals closely matched ABS 2011 enrolment totals (see Appendix A for more details).

Data preparation

Prior to sample selection, all very remote schools in WA and NSW (90 schools in total) were removed from the original list as per 2011 and 2012 procedures. The remaining schools were then used to create Primary and Secondary sample frames.

Primary and Secondary samples

The 2013 NAPLAN Calibration and Equating Samples each consist of two sub-samples. For the Calibration Sample, one sample was drawn for the Primary grade levels and the other sample for the Secondary grade levels. This same procedure was also followed for the 2013 NAPLAN Equating Sample. Figure 1 illustrates the relationship between NAPLAN Grade Levels, State/Territory and Primary and Secondary Schooling.¹

State/Territory	Grade 3	Grade 5	Grade 7	Grade 9
ACT	Primary		Secondary	
NSW				
NT				
TAS				
VIC				
QLD	Primary		Secondary	
SA				
WA				

Figure 1: Relationship between state/territory, NAPLAN grade levels and Primary/Secondary Schooling.

For each sampled school, all students in the target grade levels were included in the calibration sample. For the Primary sample, this consisted of Grade 3 and Grade 5 students in all states and territories as well as Grade 7 students in QLD, SA and WA (see Figure 1). In relation to the Secondary sample, the target grade levels were Grade 7 and Grade 9 except for QLD, SA and WA whose target grade levels consisted of Grade 9 students only.

¹ 4221.0 Schools, Australia, ABS (2009) APPENDIX 1 DIFFERENCES IN SCHOOLING STRUCTURES
<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Previousproducts/4221.0Appendix12009?opendocument&tabname=Notes&prodno=4221.0&issue=2009&num=&view=>

Measures of enrolment size

The measure of enrolment size for a particular grade level was taken to be the enrolment size in the equivalent grade for the calendar year prior. That is, the 2012 enrolment numbers contained in the sample frame were used to estimate 2013 enrolment sizes (e.g. Grade 3 enrolment sizes in the sample frame were used to estimate 2013 Grade 3 enrolment sizes). The exception to this rule was the enrolment size estimation for Grade 5 students in QLD. QLD Grade 5 in 2012 comprised approx. 40000 students while typically enrolments at this Grade in QLD are closer to 57000 students (the difference due to a change in school starting age at the time this cohort commenced school). In this case, the cohort groups are best measured using the cohort size from the previous grade in the calendar year prior. That is, 2012 Grade 4 enrolments were used as a proxy for 2013 Grade 5 enrolments in QLD.²

Calibration sample frames

The calibration sample frame for Primary grade levels comprised 7510 schools and 2609 schools at the Secondary grade levels. These totals were very close to the corresponding ABS figures (Primary + Combined school totals=7618; Secondary + Combined school totals= 2703), particularly once the previously excluded schools were taken into account.

Equating sample frames

The equating sample frame comprised 3635 primary schools and 1930 secondary schools. Schools that were in the equating sample in 2012 were excluded from selection, as were remote and very remote schools in each state. Schools with an enrolment in any of the target grade levels were also excluded if they were less than the desired target cluster size. The target cluster size was 25 students for Primary grades and 20 students for Secondary grades (as per planning for the 2011 and 2012 equating samples). Sampled schools were then assigned to one of three assessment domains (reading, language conventions or numeracy).³

Sampling methodology

Once sample frames had been created, four samples were drawn: Calibration Primary, Calibration Secondary, Equating Primary and Equating Secondary.

The same methodology was applied to select schools for each of the four samples. Firstly, this involved explicit and implicit stratification of sample frames. Schools were then selected for inclusion in the sample using random start systematic sampling where schools within each explicit stratum had an equal probability of selection.

² This raises the question as to why the measurement of enrolment size for all grade levels were not estimated based on the prior grade level enrolment figures in the previous calendar year (i.e. the actual cohort of students). While the overall cohort counts may be more accurate, this is not necessarily true at the school level. For example, if Grade 6 students from one calendar year are used to estimate Grade 7 students in the next calendar year this will end up selecting primary rather than secondary schools into the sample in some states/territories.

³ For 2013, Writing was equated to 2012 using the common assessment rubric included with the main NAPLAN assessment (rather than common person equating). Hence, there was no need to assign schools in the equating sample to the Writing domain for 2013.

Explicit stratification

Sample frames were split into 24 explicit strata with each stratum containing a particular state/territory (n=8) and sector (n=3).

Implicit stratification

Within each explicit stratum, schools were implicitly stratified by the variables detailed in Table 1.

Table 1: Implicit stratification variables

Implicit Stratification Variable	Description
SchtypeID	An indicator denoting the inclusion (or absence of) grade 7 students in the sample.
Geolocation	Geographic location based on MCEEDYA framework.
SEIFA	A postcode based measure of socioeconomic status based on ABS information which includes Census variables relating to the educational and occupational characteristics of communities, like the proportion of people with a higher qualification or those employed in a skilled occupation. Within each state/territory, schools were divided into approximately five equal groups according to their SEIFA rank order.
MeanENR	Average of student enrolments across the target grade levels within each school.

Further information relating to each implicit stratification variable has been provided below.

SchtypeID

SchtypeID was named PriSchtype for primary samples and SecSchtype for secondary samples. The coding scheme used here was consistent with 2012 procedures.

PriSchtype was set to 1 if the primary school had only grade 7 students enrolled and no grade 3 or 5 students (by definition this only occurs in QLD, SA and WA). Set equal to 2 for all other primary schools.

SecSchtype was set to 1 if the secondary school had no grade 7 students but had more than five grade 9 students (by definition this can only occur in ACT, NSW, NT, TAS, & VIC). Set equal to 2 for all other secondary schools.

Geolocation

1 = Metropolitan, 2=Provincial, 3=Remote, 4=Very Remote

SEIFA

Within each state and territory SEIFA scores were condensed into five levels with approximately equal numbers of students in each level within the state. The percentile scores within each state used to create the groups are included in Table 2.

For example, level 5 represents schools with SEIFA scores that placed them above the 80th percentile of other schools in the same state/territory (e.g. in ACT this was schools with SEIFA scores higher than 1171, in SA this was schools with SEIFA scores higher than 1027). Level 4 denotes schools with a SEIFA percentile rank in their state/territory above the 60th percentile but

less than or equal to the 80th percentile (e.g. in Victoria a SEIFA level 4 indicated that the school had a SEIFA score above 999 but equal to or less than 1068).

Once SEIFA levels were created the SEIFA levels for ACT were collapsed to 3 ordinal categories by recoding levels 2, 3 and 4 into a single level 3 (due to the small sample size in this jurisdiction combined with a relatively narrow range of SEIFA scores).

Table 2: SEIFA percentile groups

State/ Territory	Percentiles (within state)			
	20	40	60	80
ACT	1061.91	1099.29	1138.53	1170.82
NSW	923.296	950.97	982.35	1055.23
NT	863.97	872.35	962.72	1009.73
QLD	913.12	932.856	963.62	1005.122
SA	902.88	941.15	973.41	1027.42
TAS	891.73	909.994	939.89	999.126
VIC	928.98	960.96	999.26	1068.23
WA	927.04	957.56	987.16	1059.978

MeanENR

For the Primary and Secondary samples, the average enrolment size was estimated by taking the mean of enrolments for each target grade level where the enrolment size was greater than zero. For example, the enrolment size for a school in SA was equal to the average enrolment across Grades 3, 5 and 7. However, in cases where there were no students in Grade 7 for example, then the average was calculated using Grades 3 and 5 students only. While not perfect, this rule was considered the best option for calculating the average and is consistent with 2012 procedures. The sample frame contains enrolments that are both zero and system missing. It appears that zero may sometimes be used to indicate that a school does not cater for a particular Grade level while for other schools (especially small schools) zero may indicate that there are simply no enrolments for students in a particular Grade level for a given calendar year. The implication being that the mean ENR may be slightly overestimated for some small schools.

Selecting schools

Within each explicit stratum schools were selected with equal probability. Further explanation of the steps used (including relevant sampling parameters) are detailed in Appendix B.

Equating sample revised targets

In 2012 the lower year levels failed to reach the target sample population of 800 students. As a result the target population was increased from 800 to 900 in 2013. To achieve the new targets it was necessary to increase the number of schools selected.

Table 3 displays the number of schools to select in each state for a target sample size of 900 students. The number of schools sampled in 2012 is included for comparison.

Table 3: Number of schools selected in each state, 2012-2013

State/ Territory	2012 ⁴		2013 Target: 900 students in each year level	
	Primary	Secondary	Primary	Secondary
ACT	6	6	6	6
NSW	27	33	31	39
NT	6	6	6	6
QLD	15	21	17	25
SA	6	9	8	11
TAS	6	6	6	6
VIC	21	24	24	30
WA	9	12	11	14
Total	96	117	109	137

The increase in schools sampled across the states was allocated in approximate proportion to student enrolment numbers with the exception of ACT, NT and TAS where the number of sampled schools was kept the same from 2012 to 2013. The small number of schools within the ACT, NT and TAS means that it would be difficult to increase the number of schools sampled without selecting schools that were involved in the 2012 equating study.

Using Table 3, the number of expected students per domain can be seen in Table 4.

⁴ The target sample population in 2012 was 800 students per year level

Table 4: Number of students per domain, 2013

		2013 Target: 900 students in each year level	
		Number of schools	Expected sample size per domain⁵
Primary	Grade 3	109	908
	Grade 5	109	908
	Grade 7	36	300
Secondary	Grade 7	87	580
	Grade 9	137	913

Selected schools

As shown in Table 5, the calibration sample comprised 309 schools at the primary level and 300 schools at the secondary level. For the equating sample, 109 schools were selected at the primary level (approx. 36 schools for each of 3 domains) while there were 137 schools (approx. 46 schools for each of 3 domains) in the secondary equating sample.

Table 5: Number of selected schools

Sample type	Number of schools sampled
Calibration Primary	309
Calibration Secondary	300
Equating Primary	109
Equating Secondary	137

Replacement schools

Up to two replacement schools were also selected for each sample school. The overall numbers of replacement1 and replacement2 schools were close to, but slightly less than the number of selected schools (as shown in Table 6). In some cases, particularly in smaller states/territories, it was not possible to select any replacement schools. In some cases only one replacement school could be selected. The total count is the total number of schools included in the sample lists (i.e. all selected schools + replacement1 schools + replacement2 schools).

⁵ Assuming a target cluster size of 25 students per school at Primary grade levels and 20 students per school at Secondary grade levels.

Table 6: Number of selected and replacement schools

Sample type	selected	replacement1	replacement2	Total
Calibration Primary	309	309	309	927
Calibration Secondary	300	298	281	879
Equating Primary	109	108	108	325
Equating Secondary	137	132	131	400

Expected sample sizes

The expected number of students included in the calibration sample is equivalent to the sum of all enrolments at the target grade levels for selected schools. The expected calibration sample sizes for 2013 are shown in Table 7. Roughly 10500 to 11000 students are expected to be included in the calibration sample at Grade 3 and Grade 5 respectively. Approximately 33000 students are expected to be included at Grade 9. Secondary schools, in general, have higher enrolment numbers per school than primary schools and hence more secondary school students are expected for inclusion in the sample given the number of schools selected at each level (primary and secondary) is approximately equal. The total expected sample size of 20756 students for grade 7 is comprised of students drawn from both the primary and secondary calibration samples.

Table 7: Expected calibration sample sizes by grade

Grade	Sum ENR
Grade 3	10857
Grade 5	10761
Grade 7 ⁶	20756
Grade 9	32789

For the equating sample, an indication of the likely number of students included in the sample was estimated by multiplying the number of schools by the target cluster size for each grade. These figures are based on 2012 sample plans that assumed 25 students per class for the primary sample and 20 students per class for the secondary sample. As shown in Table 8, approximately 2700 students are sampled at each grade level across the 3 domains. Grade 7 is comprised of 36 schools from the primary equating sample (12 each domain with target cluster size of 25 students) and 87 schools from the secondary equating sample (29 each domain with target cluster size of 20 students).

⁶ Comprising 50535 gr07 students from the primary calibration sample and 15721 students from the secondary calibration sample

Table 8: Expected equating sample sizes by grade

Grade	Number of schools	Expected total sample size (reading, language conventions and numeracy)	Expected sample size per domain
Grade 3	109	2725	908
Grade 5	109	2725	908
Grade 7⁷	123	2640	880
Grade 9	137	2740	913

Table 9 contains the number of schools included in the equating sample for each grade and domain.

Table 9: Equating sample number of schools by domain and grade

Grade	Reading	Language Conventions	Numeracy
Grade 3	36	37	36
Grade 5	36	37	36
Grade 7	41	41	41
Grade 9	45	46	46

⁷ Comprising 36 primary schools with gr07 students (target cluster size of 25) and 87 secondary schools with gr07 students (target cluster size 20)

Appendix A***Sample Frame****Summary*

Overall, the ACARA supplied sample frame information corresponds well to ABS totals for the target year levels suggesting that the supplied data is suitable for use as the NAPLAN sample frame.

Original data

The original sample frame provided by ACARA contains 2012 information. The number of schools per state/territory is shown in Table 10 compared to ABS 2011 totals.⁸

⁸ ABS totals are based on Primary + Secondary + Combined only and do not include special schools.

Table 10 Number of schools per state/territory

State/territory	ABS All (2011)	ACARA Sample Frame (2012)	% Comparison
ACT	124	117	106%
NSW	2948	2918	101%
NT	185	181	102%
QLD	1646	1641	100%
SA	731	672	109%
TAS	250	262	95%
VIC	2138	2184	98%
WA	993	964	103%
AUST	9015	8939	101%

Table 11 contains enrolment totals by Grade and state/territory while Table 12 contains corresponding ABS totals. Yellow highlighted cells in Table 11 indicate the presence of ‘half cohorts’. Green highlighted cells indicate ‘half cohorts’ that do not affect the sample design.

Table 11 ACARA sample frame enrolment totals by grade and state/territory

ACARA Sample Frame containing 2012 enrolment information													
State	gr00_ sum	gr01_ sum	gr02_ sum	gr03_ sum	gr04_ sum	gr05_ sum	gr06_ sum	gr07_ sum	gr08_ sum	gr09_ sum	gr10_ sum	gr11_ sum	gr12_ sum
ACT		5061	4748	4935	4758	4609	4889	4825	4884	4777	4782	2707	2405
NSW		91878	88300	87723	86524	86605	87517	87148	86250	86434	86453	71362	62082
NT		3506	3301	3322	3508	3424	3310	3146	3043	2943	1727	1387	957
QLD		62358	59840	58537	56636	39858	58506	60689	59282	59176	58846	55167	49009
SA		18102	16962	18831	18347	18721	18633	19498	19655	19592	19824	19441	16919
TAS		6379	5990	6116	6392	6437	6676	6744	6701	6481	6814	1410	1333
VIC		70727	67846	68042	67286	66398	67378	68199	67704	69105	65199	60018	52576
WA		31026	29985	29560	29207	29289	29464	29856	29824	28959	17875	25383	20628

Table 12 ABS 2011 enrolment totals by grade and state/territory

ABS 2011 measure													
State	Pre Grade1	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
ACT	5023	4601	4668	4399	4314	4554	4501	4896	4812	4855	4824	5154	4332
NSW	93243	88965	88077	86468	86368	87424	87807	86190	86237	86916	87743	77358	66669
NT	3583	3327	3321	3498	3453	3356	3195	3082	3126	2782	2822	2337	1641
QLD	61988	59450	57876	55863	39172	57293	59231	58848	59278	59259	60151	56878	49527
SA	22879	18321	18673	18271	18689	18632	19325	19413	19455	19715	20523	22735	18511
TAS	6380	5933	6006	6229	6170	6479	6643	6624	6429	6800	6896	6571	6106
VIC	69988	66471	66162	65247	64366	65440	65847	65861	66139	67079	66677	63764	55623
WA	30624	29591	29014	28632	28836	29014	29489	29942	28977	18143	29602	29290	23171

Appendix B**Sampling parameters**

The sampling parameters used to draw the sample are provided in Table 14 . These can be used in conjunction with the sample frame to replicate selection of the samples. An explanation of the sample parameter variables is included in Table 13.

To select schools within each explicit sample frame, the selected schools are those whose row numbers within the sample frame belong to the set of integers produced by the following algorithm:

for each integer (i) in the range (0 to units) inclusive,

select the school if the row number for the school in the sample frame is equal to

$[(i + RN) \times interval]$ rounded to the nearest integer

Table 13: Sample parameters glossary

Sample	One of the 4 samples drawn: CP=Calibration Primary; CS=Calibration Secondary; EP=Equating Primary; ES=Equating Secondary
strataID	Explicit strata id
State	State/territory (explicit stratification variable)
Sector	C=Catholic; G=Gov; I=Indep (explicit stratification variable)
cases	Number of schools in sample frame
units	Number of schools sampled (desired)
interval	Sampling interval which is equal to cases / units
RN	Random number between 0 and 1
inclprob	School inclusion probability (each school within an explicit stratum has the same inclusion probability) = units/cases
designweight	Inverse of inclprob
Nsel	Number of schools sampled
Nr1	Number of 1st replacement schools
Nr2	Number of 2nd replacement schools

Table 14: Sampling parameters

Sample	strataID	State	Sector	cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
CP	1	ACT	C	24	5	4.8000	0.0169	0.2083	4.8008	5	5	5
CP	2	ACT	G	58	11	5.2727	0.6227	0.1897	5.2715	11	11	11
CP	3	ACT	I	17	4	4.2500	0.9206	0.2353	4.2499	4	4	4
CP	4	NSW	C	427	9	47.4444	0.7448	0.0211	47.3934	9	9	9
CP	5	NSW	G	1652	33	50.0606	0.6519	0.0200	50.0000	33	33	33
CP	6	NSW	I	305	6	50.8333	0.2555	0.0197	50.7614	6	6	6
CP	7	NT	C	12	3	4.0000	0.2691	0.2500	4.0000	3	3	3
CP	8	NT	G	132	19	6.9474	0.7123	0.1439	6.9493	19	19	19
CP	9	NT	I	15	3	5.0000	0.4821	0.2000	5.0000	3	3	3
CP	10	QLD	C	226	8	28.2500	0.1973	0.0354	28.2486	8	8	8
CP	11	QLD	G	1000	33	30.3030	0.3373	0.0330	30.3030	33	33	33
CP	12	QLD	I	174	6	29.0000	0.7861	0.0345	28.9855	6	6	6
CP	13	SA	C	86	8	10.7500	0.0265	0.0930	10.7527	8	8	8
CP	14	SA	G	414	29	14.2759	0.0426	0.0700	14.2857	29	29	29
CP	15	SA	I	95	8	11.8750	0.8261	0.0842	11.8765	8	8	8
CP	16	TAS	C	34	6	5.6667	0.3205	0.1765	5.6657	6	6	6
CP	17	TAS	G	155	21	7.3810	0.6174	0.1355	7.3801	21	21	21
CP	18	TAS	I	36	4	9.0000	0.2062	0.1111	9.0009	4	4	4
CP	19	VIC	C	399	11	36.2727	0.3875	0.0276	36.2319	11	11	11
CP	20	VIC	G	1209	31	39.0000	0.2611	0.0256	39.0625	31	31	31
CP	21	VIC	I	235	6	39.1667	0.4145	0.0255	39.2157	6	6	6
CP	22	WA	C	139	8	17.3750	0.5542	0.0576	17.3611	8	8	8
CP	23	WA	G	545	30	18.1667	0.9206	0.0550	18.1818	30	30	30
CP	24	WA	I	121	7	17.2857	0.4658	0.0579	17.2712	7	7	7

Sample	strataID	State	Sector	cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
CS	1	ACT	C	4	3	1.3333	0.8799	0.7500	1.3333	3	1	0
CS	2	ACT	G	20	9	2.2222	0.3715	0.4500	2.2222	9	9	2
CS	3	ACT	I	14	5	2.8000	0.6200	0.3571	2.8003	5	5	4
CS	4	NSW	C	115	9	12.7778	0.3621	0.0783	12.7714	9	9	9
CS	5	NSW	G	442	29	15.2414	0.6758	0.0656	15.2439	29	29	29
CS	6	NSW	I	260	10	26.0000	0.5322	0.0385	25.9740	10	10	10
CS	7	NT	C	9	2	4.5000	0.6016	0.2222	4.5005	2	2	2
CS	8	NT	G	81	11	7.3636	0.9663	0.1358	7.3638	11	11	11
CS	9	NT	I	16	4	4.0000	0.4323	0.2500	4.0000	4	4	4
CS	10	QLD	C	85	10	8.5000	0.8939	0.1176	8.5034	10	10	10
CS	11	QLD	G	261	30	8.7000	0.2076	0.1149	8.7032	30	30	30
CS	12	QLD	I	136	9	15.1111	0.9263	0.0662	15.1057	9	9	9
CS	13	SA	C	25	8	3.1250	0.2724	0.3200	3.1250	8	8	7
CS	14	SA	G	122	27	4.5185	0.3233	0.2213	4.5188	27	27	27
CS	15	SA	I	59	11	5.3636	0.3678	0.1864	5.3648	11	11	11
CS	16	TAS	C	13	6	2.1667	0.3419	0.4615	2.1668	6	6	1
CS	17	TAS	G	55	19	2.8947	0.8248	0.3455	2.8944	19	19	17
CS	18	TAS	I	30	4	7.5000	0.9894	0.1333	7.5019	4	4	4
CS	19	VIC	C	110	12	9.1667	0.2714	0.1091	9.1659	12	12	12
CS	20	VIC	G	306	26	11.7692	0.4331	0.0850	11.7647	26	26	26
CS	21	VIC	I	190	10	19.0000	0.0532	0.0526	19.0114	10	10	10
CS	22	WA	C	39	10	3.9000	0.3470	0.2564	3.9002	10	10	10
CS	23	WA	G	136	26	5.2308	0.5221	0.1912	5.2301	26	26	26
CS	24	WA	I	81	10	8.1000	0.9193	0.1235	8.0972	10	10	10

Sample	strataID	State	Sector	cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
EP	1	ACT	C	17	1	17.0000	0.8853	0.0588	17.0068	1	1	1
EP	2	ACT	G	42	4	10.5000	0.7273	0.0952	10.5042	4	4	4
EP	3	ACT	I	8	1	8.0000	0.5583	0.1250	8.0000	1	1	1
EP	4	NSW	C	256	6	42.6667	0.5659	0.0234	42.7350	6	6	6
EP	5	NSW	G	866	21	41.2381	0.4818	0.0242	41.3223	21	21	21
EP	6	NSW	I	136	4	34.0000	0.9398	0.0294	34.0136	4	4	4
EP	7	NT	C	5	1	5.0000	0.1450	0.2000	5.0000	1	1	1
EP	8	NT	G	20	4	5.0000	0.8874	0.2000	5.0000	4	4	4
EP	9	NT	I	1	1	1.0000	0.5745	1.0000	1.0000	1	0	0
EP	10	QLD	C	127	3	42.3333	0.9071	0.0236	42.3729	3	3	3
EP	11	QLD	G	462	12	38.5000	0.1438	0.0260	38.4615	12	12	12
EP	12	QLD	I	86	2	43.0000	0.6600	0.0233	42.9185	2	2	2
EP	13	SA	C	43	1	43.0000	0.3788	0.0233	42.9185	1	1	1
EP	14	SA	G	160	5	32.0000	0.2508	0.0313	31.9489	5	5	5
EP	15	SA	I	44	2	22.0000	0.6868	0.0455	21.9780	2	2	2
EP	16	TAS	C	20	1	20.0000	0.4822	0.0500	20.0000	1	1	1
EP	17	TAS	G	70	4	17.5000	0.1010	0.0571	17.5131	4	4	4
EP	18	TAS	I	7	1	7.0000	0.5061	0.1429	6.9979	1	1	1
EP	19	VIC	C	226	5	45.2000	0.6369	0.0221	45.2489	5	5	5
EP	20	VIC	G	615	16	38.4375	0.3319	0.0260	38.4615	16	16	16
EP	21	VIC	I	106	3	35.3333	0.0183	0.0283	35.3357	3	3	3
EP	22	WA	C	17	2	8.5000	0.7208	0.1176	8.5034	2	2	2
EP	23	WA	G	245	7	35.0000	0.0153	0.0286	34.9650	7	7	7
EP	24	WA	I	56	2	28.0000	0.8181	0.0357	28.0112	2	2	2

Sample	strataID	State	Sector	cases	units	interval	RN	inclprob	designweight	Nsel	Nr1	Nr2
ES	1	ACT	C	3	1	3.0000	0.8600	0.3333	3.0003	1	1	1
ES	2	ACT	G	14	3	4.6667	0.2625	0.2143	4.6664	3	3	3
ES	3	ACT	I	9	2	4.5000	0.1986	0.2222	4.5005	2	2	2
ES	4	NSW	C	106	7	15.1429	0.0656	0.0660	15.1515	7	7	7
ES	5	NSW	G	376	23	16.3478	0.3432	0.0612	16.3399	23	23	23
ES	6	NSW	I	184	9	20.4444	0.7935	0.0489	20.4499	9	9	9
ES	7	NT	C	1	1	1.0000	0.2425	1.0000	1.0000	1	0	0
ES	8	NT	G	3	3	1.0000	0.4560	1.0000	1.0000	3	0	0
ES	9	NT	I	3	2	1.5000	0.5068	0.6667	1.4999	2	1	0
ES	10	QLD	C	80	5	16.0000	0.5211	0.0625	16.0000	5	5	5
ES	11	QLD	G	189	15	12.6000	0.2715	0.0794	12.5945	15	15	15
ES	12	QLD	I	101	5	20.2000	0.4141	0.0495	20.2020	5	5	5
ES	13	SA	C	23	2	11.5000	0.7491	0.0870	11.4943	2	2	2
ES	14	SA	G	79	6	13.1667	0.9998	0.0759	13.1752	6	6	6
ES	15	SA	I	48	3	16.0000	0.4581	0.0625	16.0000	3	3	3
ES	16	TAS	C	11	1	11.0000	0.0796	0.0909	11.0011	1	1	1
ES	17	TAS	G	37	4	9.2500	0.1901	0.1081	9.2507	4	4	4
ES	18	TAS	I	11	1	11.0000	0.8112	0.0909	11.0011	1	1	1
ES	19	VIC	C	92	8	11.5000	0.8481	0.0870	11.4943	8	8	8
ES	20	VIC	G	242	16	15.1250	0.4631	0.0661	15.1286	16	16	16
ES	21	VIC	I	133	6	22.1667	0.8605	0.0451	22.1729	6	6	6
ES	22	WA	C	32	3	10.6667	0.4419	0.0938	10.6610	3	3	3
ES	23	WA	G	91	8	11.3750	0.3794	0.0879	11.3766	8	8	8
ES	24	WA	I	62	3	20.6667	0.2082	0.0484	20.6612	3	3	3

APPENDIX B. ITEM ANALYSIS

Appendix B.1 Year 3 G&P

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NAPLAN 2013, Calibration, Grade 3, GP
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (lc3q26)
Cases for this item 4167 Discrimination 0.35
Item Threshold(s): -2.15 Weighted MNSQ 0.96
Item Delta(s): -2.15

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.05	-3.36(.001)	-1.16	0.90
9	0.00	17	0.41	-0.08	-4.87(.000)	-0.75	1.04
A	1.00	3789	90.93	0.35	24.02(.000)	0.57	0.90
B	0.00	32	0.77	-0.14	-9.15(.000)	-0.77	0.91
C	0.00	94	2.26	-0.18	-11.62(.000)	-0.48	0.78
D	0.00	232	5.57	-0.24	-16.08(.000)	-0.30	0.82

=====

Item 2

item:2 (lc3q27)
Cases for this item 4167 Discrimination 0.41
Item Threshold(s): -2.09 Weighted MNSQ 0.91
Item Delta(s): -2.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	17	0.41	-0.08	-5.23(.000)	-0.61	1.01
A	0.00	76	1.82	-0.18	-11.85(.000)	-0.64	0.88
B	1.00	3772	90.52	0.41	29.03(.000)	0.59	0.88
C	0.00	275	6.60	-0.32	-22.08(.000)	-0.48	0.81
D	0.00	27	0.65	-0.13	-8.50(.000)	-0.89	0.69

=====

Item 3

item:3 (lc3q28)
Cases for this item 4165 Discrimination 0.45
Item Threshold(s): -1.62 Weighted MNSQ 0.91
Item Delta(s): -1.61

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.05(.040)	-1.33	0.00
9	0.00	24	0.58	-0.08	-5.43(.000)	-0.46	1.00
A	1.00	3584	86.05	0.45	32.47(.000)	0.63	0.86
B	0.00	218	5.23	-0.17	-11.45(.000)	-0.09	0.86
C	0.00	256	6.15	-0.33	-22.85(.000)	-0.57	0.74
D	0.00	82	1.97	-0.21	-14.19(.000)	-0.80	0.80

=====

Item 4

```

-----
item:4 (lc3q29)
Cases for this item  4160  Discrimination  0.37
Item Threshold(s):  -1.46  Weighted MNSQ  0.99
Item Delta(s):      -1.46
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.05	-2.96(.003)	-0.70	0.03
9	0.00	25	0.60	-0.10	-6.43(.000)	-0.93	0.80
A	1.00	3508	84.33	0.37	26.00(.000)	0.62	0.89
B	0.00	129	3.10	-0.27	-17.79(.000)	-0.73	0.69
C	0.00	104	2.50	-0.15	-9.53(.000)	-0.30	0.83
D	0.00	392	9.42	-0.20	-13.14(.000)	-0.01	0.81

Item 5

```

-----
item:5 (lc3q30)
Cases for this item  4157  Discrimination  0.42
Item Threshold(s):  -1.24  Weighted MNSQ  0.95
Item Delta(s):      -1.24
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.78(.076)	-0.67	0.00
9	0.00	32	0.77	-0.09	-5.77(.000)	-0.63	0.79
A	0.00	283	6.81	-0.29	-19.71(.000)	-0.39	0.79
B	0.00	142	3.42	-0.21	-14.14(.000)	-0.46	0.86
C	1.00	3393	81.62	0.42	29.91(.000)	0.65	0.87
D	0.00	306	7.36	-0.16	-10.56(.000)	0.01	0.90

Item 6

```

-----
item:6 (lc3q31)
Cases for this item  4154  Discrimination  0.47
Item Threshold(s):  -0.05  Weighted MNSQ  0.97
Item Delta(s):      -0.05
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.00	-0.07(.943)	-0.06	0.00
9	0.00	75	1.81	-0.11	-7.26(.000)	-0.38	0.86
A	0.00	844	20.32	-0.18	-11.81(.000)	0.20	0.85
B	1.00	2552	61.43	0.47	34.17(.000)	0.79	0.85
C	0.00	302	7.27	-0.33	-22.65(.000)	-0.46	0.70
D	0.00	380	9.15	-0.19	-12.40(.000)	0.01	0.79

Item 7

```

-----
item:7 (lc3q32)
Cases for this item  4148  Discrimination  0.44
Item Threshold(s):  -1.41  Weighted MNSQ  0.93
Item Delta(s):      -1.42
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.06	-3.57(.000)	-1.14	0.59
9	0.00	50	1.21	-0.10	-6.63(.000)	-0.50	0.90
A	1.00	3478	83.85	0.44	31.23(.000)	0.65	0.86
B	0.00	310	7.47	-0.24	-15.91(.000)	-0.23	0.83
C	0.00	150	3.62	-0.18	-12.09(.000)	-0.27	0.92
D	0.00	158	3.81	-0.26	-17.68(.000)	-0.59	0.79

Item 8

```

-----
item:8 (lc3q33)
Cases for this item  4139  Discrimination  0.45
Item Threshold(s):  -0.75  Weighted MNSQ  0.96
Item Delta(s):      -0.75

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.05	-2.97(.003)	-1.55	0.01
9	0.00	39	0.94	-0.10	-6.40(.000)	-0.39	0.85
A	0.00	170	4.11	-0.23	-15.45(.000)	-0.42	0.80
B	0.00	130	3.14	-0.24	-15.59(.000)	-0.57	0.84
C	1.00	3078	74.37	0.45	32.20(.000)	0.71	0.86
D	0.00	720	17.40	-0.26	-17.11(.000)	0.03	0.83

Item 9

```

-----
item:9 (lc3q34)
Cases for this item  4136  Discrimination  0.46
Item Threshold(s):  -0.55  Weighted MNSQ  0.97
Item Delta(s):      -0.55

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	30	0.73	-0.06	-3.72(.000)	-0.14	0.81
9	0.00	81	1.96	-0.13	-8.48(.000)	-0.28	0.91
A	1.00	2937	71.01	0.46	33.23(.000)	0.73	0.87
B	0.00	185	4.47	-0.19	-12.40(.000)	-0.22	0.84
C	0.00	428	10.35	-0.22	-14.17(.000)	-0.03	0.83
D	0.00	475	11.48	-0.25	-16.80(.000)	-0.07	0.75

Item 10

```

-----
item:10 (lc3q35)
Cases for this item  4135  Discrimination  0.49
Item Threshold(s):  -0.27  Weighted MNSQ  0.95
Item Delta(s):      -0.27

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.04	-2.64(.008)	-1.56	0.00
9	0.00	58	1.40	-0.10	-6.65(.000)	-0.28	0.79
A	0.00	477	11.54	-0.33	-22.31(.000)	-0.27	0.73
B	0.00	798	19.30	-0.22	-14.32(.000)	0.12	0.83
C	1.00	2722	65.83	0.49	36.02(.000)	0.79	0.84
D	0.00	79	1.91	-0.21	-13.71(.000)	-0.74	0.68

Item 11

```

-----
item:11 (lc3q36)
Cases for this item  4131  Discrimination  0.55
Item Threshold(s):  -0.34  Weighted MNSQ  0.89
Item Delta(s):      -0.35

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.05	-3.13(.002)	-1.12	0.62
9	0.00	46	1.11	-0.10	-6.57(.000)	-0.43	0.75
A	0.00	565	13.68	-0.36	-24.61(.000)	-0.23	0.74
B	0.00	269	6.51	-0.24	-16.04(.000)	-0.26	0.84
C	0.00	471	11.40	-0.20	-13.02(.000)	0.04	0.81
D	1.00	2778	67.25	0.55	42.17(.000)	0.81	0.82

Item 12

```

-----
item:12 (lc3q37)
Cases for this item  4124  Discrimination  0.46
Item Threshold(s):  -0.03  Weighted MNSQ  0.98
Item Delta(s):      -0.03

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.78(.075)	-0.67	0.00
9	0.00	52	1.26	-0.08	-4.87(.000)	-0.22	0.80
A	0.00	272	6.60	-0.20	-12.95(.000)	-0.13	0.96
B	1.00	2519	61.08	0.46	33.24(.000)	0.80	0.86
C	0.00	587	14.23	-0.21	-14.09(.000)	0.05	0.86
D	0.00	693	16.80	-0.24	-16.17(.000)	0.05	0.76

Item 13

```

-----
item:13 (lc3q38)
Cases for this item  4119  Discrimination  0.53
Item Threshold(s):   0.55  Weighted MNSQ  0.92
Item Delta(s):      0.55

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.78(.075)	-0.67	0.00
9	0.00	64	1.55	-0.10	-6.22(.000)	-0.27	0.75
A	0.00	559	13.57	-0.28	-18.46(.000)	-0.06	0.84
B	0.00	902	21.90	-0.23	-15.06(.000)	0.13	0.78
C	0.00	576	13.98	-0.18	-11.98(.000)	0.12	0.77
D	1.00	2017	48.97	0.53	40.15(.000)	0.95	0.84

Item 14

```

-----
item:14 (lc3q39)
Cases for this item  4114  Discrimination  0.49
Item Threshold(s):   0.00  Weighted MNSQ  0.96
Item Delta(s):      -0.00

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.12	-0.05	-2.94(.003)	-0.51	0.68
9	0.00	64	1.56	-0.09	-5.66(.000)	-0.23	0.86
A	0.00	708	17.21	-0.24	-16.18(.000)	0.06	0.82
B	0.00	336	8.17	-0.25	-16.87(.000)	-0.23	0.76
C	1.00	2492	60.57	0.49	35.91(.000)	0.83	0.85
D	0.00	509	12.37	-0.20	-12.77(.000)	0.08	0.81

Item 15

```

-----
item:15 (lc3q40)
Cases for this item  4106  Discrimination  0.38
Item Threshold(s):  -0.03  Weighted MNSQ  1.05
Item Delta(s):      -0.03

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.00	-0.29(.773)	0.19	0.00
9	0.00	31	0.75	-0.08	-4.94(.000)	-0.62	0.87
A	0.00	338	8.23	-0.30	-20.11(.000)	-0.34	0.85
B	0.00	267	6.50	-0.28	-18.90(.000)	-0.40	0.77
C	0.00	955	23.26	-0.07	-4.22(.000)	0.42	0.81
D	1.00	2514	61.23	0.38	26.55(.000)	0.75	0.86

Item 16

```

-----
item:16 (lc3q41)
Cases for this item  4085  Discrimination  0.53
Item Threshold(s):  0.23  Weighted MNSQ  0.93
Item Delta(s):      0.23

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.00	0.14(.892)	0.52	0.00
9	0.00	48	1.18	-0.07	-4.19(.000)	-0.11	0.88
A	0.00	910	22.28	-0.20	-13.11(.000)	0.18	0.80
B	0.00	539	13.19	-0.28	-18.84(.000)	-0.08	0.78
C	0.00	302	7.39	-0.29	-19.23(.000)	-0.31	0.72
D	1.00	2285	55.94	0.53	39.65(.000)	0.89	0.82

Item 17

```

-----
item:17 (lc3q42)
Cases for this item  4070  Discrimination  0.47
Item Threshold(s):  0.41  Weighted MNSQ  0.98
Item Delta(s):      0.41

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.48(.140)	-0.23	0.59
9	0.00	61	1.50	-0.07	-4.21(.000)	-0.09	0.90
A	0.00	682	16.76	-0.27	-17.54(.000)	0.04	0.79
B	0.00	965	23.71	-0.17	-11.31(.000)	0.23	0.81
C	0.00	231	5.68	-0.22	-14.53(.000)	-0.23	0.75
D	1.00	2129	52.31	0.47	33.68(.000)	0.88	0.86

Item 18

```

-----
item:18 (lc3q43)
Cases for this item  4051  Discrimination  0.40
Item Threshold(s):  0.66  Weighted MNSQ  1.03
Item Delta(s):      0.65

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.17(.240)	-0.33	0.44
9	0.00	50	1.23	-0.06	-3.77(.000)	-0.09	0.72
A	0.00	1191	29.40	-0.20	-13.13(.000)	0.26	0.82
B	1.00	1910	47.15	0.40	27.61(.000)	0.86	0.89
C	0.00	352	8.69	-0.18	-11.78(.000)	0.03	0.86
D	0.00	546	13.48	-0.14	-9.12(.000)	0.22	0.86

Item 19

```

-----
item:19 (lc3q44)
Cases for this item  4040  Discrimination  0.30
Item Threshold(s):  0.95  Weighted MNSQ  1.10
Item Delta(s):      0.95

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.22(.026)	-1.18	0.00
9	0.00	56	1.39	-0.07	-4.15(.000)	-0.12	0.80
A	1.00	1660	41.09	0.30	20.23(.000)	0.81	0.96
B	0.00	719	17.80	-0.22	-14.04(.000)	0.13	0.82
C	0.00	777	19.23	-0.10	-6.59(.000)	0.35	0.86
D	0.00	827	20.47	-0.04	-2.83(.005)	0.43	0.81

Item 20

```

-----
item:20 (lc3q45)
Cases for this item  4014  Discrimination  0.39
Item Threshold(s):  0.80  Weighted MNSQ  1.04
Item Delta(s):      0.80

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	51	1.27	-0.05	-3.36(.001)	0.01	0.95
A	0.00	882	21.97	-0.28	-18.13(.000)	0.10	0.84
B	1.00	1776	44.25	0.39	26.73(.000)	0.87	0.91
C	0.00	436	10.86	-0.16	-10.09(.000)	0.16	0.81
D	0.00	869	21.65	-0.06	-3.74(.000)	0.42	0.80

Item 21

```

-----
item:21 (lc3q46)
Cases for this item  3997  Discrimination  0.38
Item Threshold(s):  0.69  Weighted MNSQ  1.05
Item Delta(s):      0.68

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	70	1.75	-0.05	-3.27(.001)	0.10	0.80
A	0.00	907	22.69	-0.12	-7.81(.000)	0.34	0.86
B	0.00	647	16.19	-0.23	-14.83(.000)	0.09	0.81
C	1.00	1865	46.66	0.38	26.32(.000)	0.86	0.89
D	0.00	508	12.71	-0.15	-9.49(.000)	0.19	0.85

Item 22

```

-----
item:22 (lc3q47)
Cases for this item  3976  Discrimination  0.32
Item Threshold(s):  1.61  Weighted MNSQ  1.06
Item Delta(s):      1.61

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.01	-0.64(.522)	0.19	0.69
9	0.00	88	2.21	-0.06	-3.99(.000)	0.11	0.89
A	0.00	708	17.81	-0.19	-12.35(.000)	0.18	0.86
B	0.00	1351	33.98	-0.04	-2.32(.020)	0.47	0.85
C	0.00	690	17.35	-0.11	-7.00(.000)	0.32	0.87
D	1.00	1136	28.57	0.32	20.93(.000)	0.95	0.93

Item 23

```

-----
item:23 (lc3q48)
Cases for this item  3964  Discrimination  0.35
Item Threshold(s):  1.03  Weighted MNSQ  1.06
Item Delta(s):      1.03

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	54	1.36	-0.04	-2.50(.012)	0.20	1.12
A	0.00	950	23.97	-0.24	-15.78(.000)	0.16	0.94
B	0.00	582	14.68	-0.08	-5.14(.000)	0.34	0.86
C	0.00	811	20.46	-0.09	-5.59(.000)	0.38	0.76
D	1.00	1567	39.53	0.35	23.80(.000)	0.89	0.88

Item 24

```

-----
item:24 (lc3q49)
Cases for this item  3921  Discrimination  0.15
Item Threshold(s):  1.51  Weighted MNSQ  1.20
Item Delta(s):      1.51
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.01	-0.73(.464)	0.61	0.00
9	0.00	42	1.07	-0.08	-5.00(.000)	-0.13	0.76
A	0.00	608	15.51	-0.24	-15.37(.000)	0.07	0.82
B	0.00	1297	33.08	0.06	3.91(.000)	0.59	0.92
C	1.00	1194	30.45	0.15	9.23(.000)	0.72	0.96
D	0.00	779	19.87	-0.00	-0.27(.789)	0.52	0.81

Item 25

```

-----
item:25 (lc3q50)
Cases for this item  3900  Discrimination  0.25
Item Threshold(s):  1.78  Weighted MNSQ  1.08
Item Delta(s):      1.78
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	49	1.26	-0.04	-2.31(.021)	0.31	0.82
A	0.00	620	15.90	-0.20	-12.79(.000)	0.15	0.82
B	1.00	1003	25.72	0.25	16.45(.000)	0.91	1.01
C	0.00	568	14.56	-0.25	-15.80(.000)	0.06	0.85
D	0.00	1660	42.56	0.11	6.69(.000)	0.61	0.80

Item 26

```

-----
item:26 (lc3q51)
Cases for this item  3881  Discrimination  0.25
Item Threshold(s):  1.81  Weighted MNSQ  1.09
Item Delta(s):      1.81
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	25	0.64	-0.04	-2.20(.028)	0.17	0.82
A	0.00	1243	32.03	-0.10	-6.19(.000)	0.40	0.89
B	1.00	979	25.23	0.25	16.12(.000)	0.92	0.95
C	0.00	925	23.83	-0.09	-5.76(.000)	0.39	0.87
D	0.00	709	18.27	-0.05	-3.33(.001)	0.41	0.85

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 2.14% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

```

-----
N                4167
Mean             15.32
Standard Deviation  4.71
Variance         22.20
Skewness        -0.21
Kurtosis        -0.44
Standard error of mean  0.07
Standard error of measurement  2.28
Coefficient Alpha  0.77
-----

```

Appendix B.2 Year 3 Numeracy

=====

NAPLAN 2013, Calibration, Grade 3, Numeracy
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (n3q01)
Cases for this item 4148 Discrimination 0.37
Item Threshold(s): -2.80 Weighted MNSQ 0.92
Item Delta(s): -2.80

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.05	-2.96(.003)	-2.28	0.75
9	0.00	17	0.41	-0.08	-5.17(.000)	-1.19	0.85
A	0.00	140	3.38	-0.22	-14.19(.000)	-1.06	1.07
B	1.00	3818	92.04	0.37	25.54(.000)	0.22	1.05
C	0.00	108	2.60	-0.22	-14.83(.000)	-1.34	0.80
D	0.00	63	1.52	-0.16	-10.15(.000)	-1.18	0.84

=====

Item 2

item:2 (n3q02)
Cases for this item 4148 Discrimination 0.41
Item Threshold(s): -2.25 Weighted MNSQ 0.92
Item Delta(s): -2.25

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	8	0.19	-0.06	-3.79(.000)	-1.51	1.27
9	0.00	17	0.41	-0.09	-5.95(.000)	-1.30	0.84
A	0.00	242	5.83	-0.23	-15.01(.000)	-0.83	0.96
B	1.00	3637	87.68	0.41	29.35(.000)	0.27	1.04
C	0.00	187	4.51	-0.27	-17.75(.000)	-1.15	0.89
D	0.00	57	1.37	-0.17	-10.94(.000)	-1.29	0.97

=====

Item 3

item:3 (n3q03)
Cases for this item 4147 Discrimination 0.35
Item Threshold(s): -1.96 Weighted MNSQ 1.02
Item Delta(s): -1.96

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.29(.022)	-1.85	1.36
9	0.00	24	0.58	-0.10	-6.46(.000)	-1.19	1.09
A	1.00	3510	84.64	0.35	24.38(.000)	0.27	1.05
B	0.00	445	10.73	-0.23	-15.17(.000)	-0.58	1.02
C	0.00	57	1.37	-0.14	-9.17(.000)	-1.12	0.89
D	0.00	109	2.63	-0.20	-13.11(.000)	-1.12	0.95

=====

Item 4

item:4 (n3q04)
Cases for this item 4146 Discrimination 0.31
Item Threshold(s): -2.66 Weighted MNSQ 0.98
Item Delta(s): -2.66

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	342	8.25	-0.29	-19.67(.000)	-0.91	1.03
1	1.00	3777	91.10	0.31	21.16(.000)	0.21	1.07
9	0.00	27	0.65	-0.11	-6.85(.000)	-1.24	0.99

=====

Item 5

item:5 (n3q05)
Cases for this item 4146 Discrimination 0.32
Item Threshold(s): -2.09 Weighted MNSQ 1.02
Item Delta(s): -2.09

```
-----
Label      Score      Count      % of tot  Pt Bis      t   (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         3          0.07     -0.02     -1.34(.179) -0.83      2.17
9          0.00        18          0.43     -0.08     -5.06(.000) -1.06      1.26
A          0.00       173          4.17     -0.26    -17.06(.000) -1.15      1.03
B          0.00       288          6.95     -0.12     -7.47(.000) -0.33      1.11
C          0.00         96          2.32     -0.17    -11.19(.000) -1.03      0.94
D          1.00      3568         86.06     0.32     22.00(.000)  0.25      1.05
=====
```

Item 6

```
-----
item:6 (n3q06)
Cases for this item  4146  Discrimination  0.51
Item Threshold(s):  -1.70  Weighted MNSQ  0.87
Item Delta(s):      -1.71
=====
```

```
-----
Label      Score      Count      % of tot  Pt Bis      t   (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         2          0.05     -0.04     -2.85(.004) -2.44      0.53
9          0.00        23          0.55     -0.05     -3.01(.003) -0.37      1.13
A          0.00       554          13.36     -0.44    -31.25(.000) -1.02      0.83
B          0.00       148          3.57     -0.19    -12.17(.000) -0.89      0.95
C          1.00      3384         81.62     0.51     38.00(.000)  0.36      1.00
D          0.00         35          0.84     -0.10     -6.65(.000) -1.14      1.02
=====
```

Item 7

```
-----
item:7 (n3q07)
Cases for this item  4146  Discrimination  0.46
Item Threshold(s):  -0.89  Weighted MNSQ  0.99
Item Delta(s):      -0.89
=====
```

```
-----
Label      Score      Count      % of tot  Pt Bis      t   (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         17          0.41     -0.05     -3.47(.001) -0.87      0.83
9          0.00        22          0.53     -0.08     -5.41(.000) -0.98      0.99
A          0.00       399          9.62     -0.17    -10.81(.000) -0.41      0.92
B          1.00      2872         69.27     0.46     33.51(.000)  0.42      1.03
C          0.00       232          5.60     -0.16    -10.35(.000) -0.53      1.06
D          0.00       604          14.57     -0.34    -22.89(.000) -0.71      0.94
=====
```

Item 8

```
-----
item:8 (n3q08)
Cases for this item  4146  Discrimination  0.47
Item Threshold(s):  -2.25  Weighted MNSQ  0.87
Item Delta(s):      -2.25
=====
```

```
-----
Label      Score      Count      % of tot  Pt Bis      t   (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         3          0.07     -0.02     -1.00(.318) -0.76      1.82
9          0.00        32          0.77     -0.11     -6.88(.000) -1.11      0.99
A          0.00       195          4.70     -0.27    -17.98(.000) -1.22      0.92
B          0.00       174          4.20     -0.29    -19.83(.000) -1.30      0.76
C          1.00      3635         87.67     0.47     33.97(.000)  0.29      1.01
D          0.00       107          2.58     -0.17    -11.43(.000) -0.95      0.93
=====
```

Item 9

```

-----
item:9 (n3q09)
Cases for this item  4146  Discrimination  0.54
Item Threshold(s):  -1.66  Weighted MNSQ  0.85
Item Delta(s):      -1.67

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.10	-0.04	-2.39(.017)	-1.25	1.17
9	0.00	19	0.46	-0.07	-4.54(.000)	-1.05	1.00
A	0.00	94	2.27	-0.21	-13.86(.000)	-1.30	0.78
B	0.00	224	5.40	-0.35	-23.81(.000)	-1.36	0.75
C	0.00	442	10.66	-0.31	-21.18(.000)	-0.79	0.80
D	1.00	3363	81.11	0.54	41.51(.000)	0.38	0.99

Item 10

```

-----
item:10 (n3q10)
Cases for this item  4144  Discrimination  0.51
Item Threshold(s):  -1.03  Weighted MNSQ  0.93
Item Delta(s):      -1.03

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.03(.042)	-2.81	0.00
9	0.00	30	0.72	-0.07	-4.26(.000)	-0.76	1.20
A	0.00	570	13.75	-0.30	-20.56(.000)	-0.63	0.84
B	0.00	336	8.11	-0.26	-17.56(.000)	-0.81	0.92
C	1.00	2968	71.62	0.51	37.98(.000)	0.43	1.02
D	0.00	239	5.77	-0.20	-13.07(.000)	-0.70	0.90

Item 11

```

-----
item:11 (n3q11)
Cases for this item  4144  Discrimination  0.51
Item Threshold(s):  -0.86  Weighted MNSQ  0.94
Item Delta(s):      -0.86

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.03	-2.22(.027)	-1.40	1.96
9	0.00	20	0.48	-0.07	-4.37(.000)	-0.85	0.85
A	0.00	346	8.35	-0.23	-15.45(.000)	-0.63	0.91
B	0.00	277	6.68	-0.19	-12.65(.000)	-0.62	0.87
C	0.00	96	2.32	-0.21	-13.59(.000)	-1.30	0.94
D	1.00	2844	68.63	0.51	38.03(.000)	0.46	1.01
E	0.00	559	13.49	-0.25	-16.90(.000)	-0.54	0.93

Item 12

```

-----
item:12 (n3q12)
Cases for this item  4144  Discrimination  0.53
Item Threshold(s):  -0.70  Weighted MNSQ  0.93
Item Delta(s):      -0.70

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.59(.111)	-1.14	0.32
9	0.00	24	0.58	-0.03	-1.89(.059)	-0.28	1.02
A	0.00	391	9.44	-0.34	-23.19(.000)	-0.97	0.95
B	0.00	688	16.60	-0.27	-18.31(.000)	-0.51	0.84
C	1.00	2730	65.88	0.53	39.81(.000)	0.50	1.00
D	0.00	309	7.46	-0.17	-11.38(.000)	-0.51	0.91

Item 13

```

-----
item:13 (n3ql3)
Cases for this item  4144  Discrimination  0.49
Item Threshold(s):  -0.45  Weighted MNSQ  0.98
Item Delta(s):      -0.45
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	16	0.39	-0.08	-5.08(.000)	-1.18	1.15
A	1.00	2533	61.12	0.49	35.83(.000)	0.51	1.04
B	0.00	92	2.22	-0.15	-9.92(.000)	-0.94	0.86
C	0.00	1083	26.13	-0.30	-20.60(.000)	-0.42	0.91
D	0.00	420	10.14	-0.25	-16.71(.000)	-0.64	0.87

Item 14

```

-----
item:14 (n3ql4)
Cases for this item  4143  Discrimination  0.46
Item Threshold(s):  -0.52  Weighted MNSQ  1.01
Item Delta(s):      -0.52
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	41	0.99	-0.06	-3.70(.000)	-0.67	1.03
A	1.00	2590	62.52	0.46	33.45(.000)	0.47	1.05
B	0.00	812	19.60	-0.27	-17.76(.000)	-0.43	0.95
C	0.00	439	10.60	-0.17	-11.24(.000)	-0.37	0.92
D	0.00	261	6.30	-0.24	-16.10(.000)	-0.78	0.89

Item 15

```

-----
item:15 (n3ql5)
Cases for this item  4143  Discrimination  0.46
Item Threshold(s):  -0.56  Weighted MNSQ  1.01
Item Delta(s):      -0.57
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1471	35.51	-0.43	-30.33(.000)	-0.46	0.99
1	1.00	2624	63.34	0.46	32.98(.000)	0.46	1.01
9	0.00	48	1.16	-0.15	-9.59(.000)	-1.32	1.06

Item 16

```

-----
item:16 (n3ql6)
Cases for this item  4143  Discrimination  0.59
Item Threshold(s):  -0.05  Weighted MNSQ  0.88
Item Delta(s):      -0.05
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1806	43.59	-0.54	-41.79(.000)	-0.52	0.90
1	1.00	2208	53.29	0.59	46.75(.000)	0.68	0.95
9	0.00	129	3.11	-0.13	-8.67(.000)	-0.67	0.96

Item 17

```

-----
item:17 (n3q17)
Cases for this item 4142 Discrimination 0.57
Item Threshold(s): 0.01 Weighted MNSQ 0.91
Item Delta(s): 0.01

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	9	0.22	-0.06	-3.76(.000)	-1.08	1.05
9	0.00	18	0.43	-0.05	-3.52(.000)	-0.62	1.33
A	0.00	540	13.04	-0.24	-15.59(.000)	-0.53	1.02
B	0.00	1181	28.51	-0.32	-21.39(.000)	-0.38	0.82
C	1.00	2159	52.12	0.57	44.21(.000)	0.66	0.98
D	0.00	235	5.67	-0.24	-15.70(.000)	-0.86	1.00

Item 18

```

-----
item:18 (n3q18)
Cases for this item 4142 Discrimination 0.51
Item Threshold(s): -0.20 Weighted MNSQ 0.97
Item Delta(s): -0.20

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.84(.065)	-1.31	0.00
9	0.00	34	0.82	-0.09	-5.65(.000)	-0.92	1.13
A	0.00	427	10.31	-0.18	-12.08(.000)	-0.45	0.86
B	1.00	2332	56.30	0.51	38.25(.000)	0.58	1.02
C	0.00	1055	25.47	-0.29	-19.83(.000)	-0.42	0.91
D	0.00	293	7.07	-0.24	-15.67(.000)	-0.73	1.01

Item 19

```

-----
item:19 (n3q19)
Cases for this item 4141 Discrimination 0.48
Item Threshold(s): -0.21 Weighted MNSQ 1.00
Item Delta(s): -0.21

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	48	1.16	-0.09	-5.80(.000)	-0.79	0.95
A	0.00	201	4.85	-0.21	-13.73(.000)	-0.79	0.97
B	1.00	2338	56.46	0.48	35.17(.000)	0.55	1.04
C	0.00	1131	27.31	-0.21	-14.01(.000)	-0.24	0.90
D	0.00	423	10.21	-0.29	-19.66(.000)	-0.78	0.80

Item 20

```

-----
item:20 (n3q20)
Cases for this item 4135 Discrimination 0.44
Item Threshold(s): -0.02 Weighted MNSQ 1.04
Item Delta(s): -0.01

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	108	2.61	-0.10	-6.23(.000)	-0.50	0.98
A	0.00	688	16.64	-0.24	-16.17(.000)	-0.44	0.94
B	0.00	535	12.94	-0.23	-15.31(.000)	-0.51	0.94
C	0.00	629	15.21	-0.11	-6.89(.000)	-0.15	0.99
D	1.00	2175	52.60	0.44	31.95(.000)	0.55	1.04

Item 21

```

-----
item:21 (n3q21)
Cases for this item  4134  Discrimination  0.46
Item Threshold(s):  0.22  Weighted MNSQ  1.02
Item Delta(s):      0.22

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.00	-0.13(.899)	-0.11	0.20
9	0.00	30	0.73	-0.06	-3.60(.000)	-0.60	1.11
A	1.00	1983	47.97	0.46	33.12(.000)	0.61	1.04
B	0.00	1429	34.57	-0.33	-22.62(.000)	-0.35	0.93
C	0.00	477	11.54	-0.07	-4.35(.000)	-0.10	0.94
D	0.00	213	5.15	-0.20	-13.22(.000)	-0.80	1.09

Item 22

```

-----
item:22 (n3q22)
Cases for this item  4134  Discrimination  0.41
Item Threshold(s):  0.59  Weighted MNSQ  1.05
Item Delta(s):      0.58

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.03	-1.81(.070)	-0.73	0.82
9	0.00	36	0.87	-0.07	-4.61(.000)	-0.70	1.01
A	0.00	1047	25.33	-0.13	-8.23(.000)	-0.10	0.90
B	0.00	787	19.04	-0.12	-8.03(.000)	-0.16	0.84
C	0.00	576	13.93	-0.26	-17.23(.000)	-0.53	0.98
D	1.00	1685	40.76	0.41	28.80(.000)	0.62	1.17

Item 23

```

-----
item:23 (n3q23)
Cases for this item  4134  Discrimination  0.42
Item Threshold(s):  0.55  Weighted MNSQ  1.06
Item Delta(s):      0.55

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.02	-1.21(.228)	-0.44	0.00
9	0.00	42	1.02	-0.04	-2.84(.005)	-0.36	1.09
A	0.00	655	15.84	-0.25	-16.80(.000)	-0.49	0.99
B	0.00	794	19.21	-0.15	-9.69(.000)	-0.22	1.04
C	0.00	926	22.40	-0.12	-7.74(.000)	-0.10	0.92
D	1.00	1716	41.51	0.42	29.51(.000)	0.63	1.06

Item 24

```

-----
item:24 (n3q24)
Cases for this item  4132  Discrimination  0.32
Item Threshold(s):  0.55  Weighted MNSQ  1.15
Item Delta(s):      0.56

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.00	-0.25(.803)	-0.62	0.00
9	0.00	105	2.54	-0.06	-4.13(.000)	-0.32	1.04
A	1.00	1708	41.34	0.32	22.02(.000)	0.52	1.14
B	0.00	625	15.13	-0.15	-10.01(.000)	-0.26	1.02
C	0.00	637	15.42	-0.18	-11.60(.000)	-0.32	0.95
D	0.00	1056	25.56	-0.07	-4.46(.000)	-0.00	0.98

Item 25

```

-----
item:25 (n3q25)
Cases for this item  4130  Discrimination  0.44
Item Threshold(s):  0.67  Weighted MNSQ  1.02
Item Delta(s):      0.67
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	6	0.15	-0.02	-1.33(.184)	-0.51	1.00
9	0.00	32	0.77	-0.04	-2.31(.021)	-0.35	0.89
A	0.00	586	14.19	-0.22	-14.44(.000)	-0.43	0.93
B	0.00	241	5.84	-0.09	-5.88(.000)	-0.27	1.08
C	1.00	1616	39.13	0.44	31.81(.000)	0.68	1.06
D	0.00	1649	39.93	-0.23	-15.48(.000)	-0.17	0.98

Item 26

```

-----
item:26 (n3q26)
Cases for this item  4129  Discrimination  0.34
Item Threshold(s):  1.00  Weighted MNSQ  1.11
Item Delta(s):      1.00
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	46	1.11	-0.06	-4.04(.000)	-0.65	0.88
A	1.00	1364	33.03	0.34	23.52(.000)	0.63	1.12
B	0.00	1523	36.89	0.12	7.56(.000)	0.26	0.92
C	0.00	363	8.79	-0.14	-9.35(.000)	-0.37	0.95
D	0.00	260	6.30	-0.18	-12.02(.000)	-0.60	0.87
E	0.00	573	13.88	-0.36	-25.14(.000)	-0.78	0.87

Item 27

```

-----
item:27 (n3q27)
Cases for this item  4121  Discrimination  0.18
Item Threshold(s):  0.96  Weighted MNSQ  1.27
Item Delta(s):      0.96
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.01	0.39(.697)	0.63	0.00
9	0.00	58	1.41	-0.05	-3.09(.002)	-0.43	0.94
A	0.00	275	6.67	-0.20	-12.77(.000)	-0.62	0.94
B	0.00	581	14.10	-0.23	-15.15(.000)	-0.48	0.90
C	0.00	1818	44.12	0.10	6.59(.000)	0.23	1.02
D	1.00	1388	33.68	0.18	11.52(.000)	0.39	1.18

Item 28

```

-----
item:28 (n3q28)
Cases for this item  4115  Discrimination  0.50
Item Threshold(s):  2.16  Weighted MNSQ  0.87
Item Delta(s):      2.16
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3316	80.58	-0.41	-28.49(.000)	-0.09	0.97
1	1.00	655	15.92	0.50	37.03(.000)	1.32	0.95
9	0.00	144	3.50	-0.12	-7.85(.000)	-0.53	1.25

Item 29

```

-----
item:29 (n3q29)
Cases for this item  4105  Discrimination  0.37
Item Threshold(s):  1.09  Weighted MNSQ  1.07
Item Delta(s):      1.09
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.41(.684)	0.02	0.00
9	0.00	23	0.56	-0.02	-1.12(.261)	-0.12	0.72
A	0.00	233	5.68	-0.08	-5.36(.000)	-0.26	1.21
B	1.00	1291	31.45	0.37	25.22(.000)	0.67	1.13
C	0.00	344	8.38	-0.05	-3.39(.001)	-0.03	1.12
D	0.00	2213	53.91	-0.27	-17.99(.000)	-0.14	0.96

Item 30

```

-----
item:30 (n3q30)
Cases for this item  4095  Discrimination  0.26
Item Threshold(s):  1.44  Weighted MNSQ  1.17
Item Delta(s):      1.44
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2905	70.94	-0.19	-12.56(.000)	-0.02	1.06
1	1.00	1054	25.74	0.26	16.99(.000)	0.60	1.11
9	0.00	136	3.32	-0.14	-8.91(.000)	-0.67	1.02

Item 31

```

-----
item:31 (n3q31)
Cases for this item  4086  Discrimination  0.37
Item Threshold(s):  0.37  Weighted MNSQ  1.12
Item Delta(s):      0.37
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	33	0.81	-0.06	-3.80(.000)	-0.71	1.02
A	0.00	1664	40.72	-0.17	-10.79(.000)	-0.08	1.01
B	0.00	423	10.35	-0.21	-13.42(.000)	-0.50	1.00
C	1.00	1842	45.08	0.37	25.11(.000)	0.54	1.06
D	0.00	124	3.03	-0.19	-12.21(.000)	-1.01	1.00

Item 32

```

-----
item:32 (n3q32)
Cases for this item  4070  Discrimination  0.47
Item Threshold(s):  2.48  Weighted MNSQ  0.87
Item Delta(s):      2.48
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3378	83.00	-0.38	-25.90(.000)	-0.06	1.00
1	1.00	513	12.60	0.47	34.36(.000)	1.47	0.92
9	0.00	179	4.40	-0.08	-5.02(.000)	-0.32	0.96

Item 33

```

-----
item:33 (n3q33)
Cases for this item  4016  Discrimination  0.21
Item Threshold(s):  3.67  Weighted MNSQ  1.02
Item Delta(s):      3.68
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3624	90.24	-0.14	-8.93(.000)	0.08	1.06
1	1.00	192	4.78	0.21	13.70(.000)	1.24	1.36
9	0.00	200	4.98	-0.02	-1.07(.285)	0.04	1.05

Item 34

```

-----
item:34 (n3q34)
Cases for this item  3988  Discrimination  0.31
Item Threshold(s):  3.46  Weighted MNSQ  0.99
Item Delta(s):      3.46
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3667	91.95	-0.23	-15.15(.000)	0.06	1.06
1	1.00	230	5.77	0.31	20.46(.000)	1.50	0.95
9	0.00	91	2.28	-0.06	-3.55(.000)	-0.27	1.06

Item 35

```

-----
item:35 (n3q35)
Cases for this item  3951  Discrimination  0.33
Item Threshold(s):  3.66  Weighted MNSQ  0.96
Item Delta(s):      3.66
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3659	92.61	-0.28	-18.23(.000)	0.05	1.05
1	1.00	192	4.86	0.33	22.16(.000)	1.74	0.99
9	0.00	100	2.53	0.01	0.55(.584)	0.10	0.92

```

-----
The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 0.66% of the data are missing.
-----

```

The following results are scaled to assume that a single response was provided for each item.

```

-----
N                4148
Mean             18.55
Standard Deviation  6.28
Variance         39.47
Skewness         -0.06
Kurtosis         -0.52
Standard error of mean  0.10
Standard error of measurement  2.36
Coefficient Alpha  0.86
-----

```

Appendix B.3 Year 3 Reading

=====

NAPLAN 2013, Calibration, Grade 3, Reading
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (r3q01)

Cases for this item 4181 Discrimination 0.39
Item Threshold(s): -2.48 Weighted MNSQ 0.90
Item Delta(s): -2.48

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	4	0.10	-0.03	-1.87(.061)	-1.03	1.31
A	0.00	167	3.99	-0.29	-19.81(.000)	-1.23	0.69
B	0.00	120	2.87	-0.25	-16.92(.000)	-1.22	0.71
C	1.00	3791	90.67	0.39	27.73(.000)	0.38	1.04
D	0.00	99	2.37	-0.09	-6.02(.000)	-0.29	1.08

=====

Item 2

item:2 (r3q02)

Cases for this item 4181 Discrimination 0.36
Item Threshold(s): -2.16 Weighted MNSQ 0.96
Item Delta(s): -2.17

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-0.98(.328)	0.04	1.70
9	0.00	8	0.19	-0.05	-3.48(.001)	-0.91	0.94
A	1.00	3680	88.02	0.36	25.20(.000)	0.39	1.05
B	0.00	219	5.24	-0.20	-13.29(.000)	-0.60	1.02
C	0.00	54	1.29	-0.16	-10.32(.000)	-1.23	0.78
D	0.00	218	5.21	-0.24	-15.75(.000)	-0.73	0.82

=====

Item 3

item:3 (r3q03)

Cases for this item 4180 Discrimination 0.46
Item Threshold(s): -2.21 Weighted MNSQ 0.86
Item Delta(s): -2.21

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.35(.724)	-0.02	0.00
9	0.00	15	0.36	-0.07	-4.77(.000)	-1.10	0.99
A	0.00	206	4.93	-0.30	-20.25(.000)	-0.98	0.65
B	0.00	170	4.07	-0.23	-15.34(.000)	-0.89	0.85
C	1.00	3698	88.47	0.46	33.56(.000)	0.42	1.03
D	0.00	90	2.15	-0.22	-14.80(.000)	-1.34	0.70

=====

Item 4

```

-----
item:4 (r3q04)
Cases for this item  4179  Discrimination  0.51
Item Threshold(s):  -1.59  Weighted MNSQ  0.87
Item Delta(s):      -1.58
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	17	0.41	-0.05	-3.41(.001)	-0.64	0.90
A	0.00	331	7.92	-0.34	-23.43(.000)	-0.92	0.77
B	1.00	3409	81.57	0.51	38.55(.000)	0.50	1.00
C	0.00	231	5.53	-0.25	-16.37(.000)	-0.76	0.81
D	0.00	191	4.57	-0.23	-14.96(.000)	-0.81	0.82

Item 5

```

-----
item:5 (r3q05)
Cases for this item  4178  Discrimination  0.48
Item Threshold(s):  -2.03  Weighted MNSQ  0.86
Item Delta(s):      -2.03
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	13	0.31	-0.09	-5.52(.000)	-1.39	0.76
A	0.00	202	4.83	-0.29	-19.40(.000)	-1.03	0.81
B	1.00	3623	86.72	0.48	35.01(.000)	0.45	1.02
C	0.00	212	5.07	-0.28	-18.54(.000)	-0.99	0.73
D	0.00	128	3.06	-0.20	-13.30(.000)	-0.89	0.79

Item 6

```

-----
item:6 (r3q06)
Cases for this item  4174  Discrimination  0.56
Item Threshold(s):  -0.87  Weighted MNSQ  0.86
Item Delta(s):      -0.87
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.02	-1.35(.177)	-0.73	0.00
9	0.00	35	0.84	-0.08	-4.94(.000)	-0.73	1.06
A	0.00	596	14.28	-0.29	-19.82(.000)	-0.49	0.86
B	0.00	352	8.43	-0.31	-20.82(.000)	-0.75	0.83
C	0.00	229	5.49	-0.27	-17.84(.000)	-0.83	0.77
D	1.00	2961	70.94	0.56	44.04(.000)	0.63	0.97

Item 7

```

-----
item:7 (r3q07)
Cases for this item  4173  Discrimination  0.51
Item Threshold(s):  -1.26  Weighted MNSQ  0.90
Item Delta(s):      -1.26
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	27	0.65	-0.06	-3.85(.000)	-0.72	0.99
A	0.00	198	4.74	-0.25	-16.69(.000)	-0.86	0.82
B	1.00	3219	77.14	0.51	38.20(.000)	0.54	1.00
C	0.00	296	7.09	-0.26	-17.27(.000)	-0.69	0.89
D	0.00	433	10.38	-0.29	-19.83(.000)	-0.63	0.82

Item 8

```

-----
item:8 (r3q08)
Cases for this item  4172  Discrimination  0.54
Item Threshold(s):  -1.20  Weighted MNSQ  0.86
Item Delta(s):      -1.21
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	28	0.67	-0.06	-4.15(.000)	-0.66	1.10
A	0.00	142	3.40	-0.25	-16.80(.000)	-1.13	0.77
B	0.00	346	8.29	-0.32	-21.57(.000)	-0.78	0.83
C	0.00	470	11.27	-0.29	-19.83(.000)	-0.54	0.84
D	1.00	3186	76.37	0.54	41.86(.000)	0.56	0.99

Item 9

```

-----
item:9 (r3q09)
Cases for this item  4170  Discrimination  0.49
Item Threshold(s):  -0.11  Weighted MNSQ  0.99
Item Delta(s):      -0.11
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.40(.016)	-2.00	0.35
9	0.00	38	0.91	-0.10	-6.23(.000)	-0.91	0.90
A	1.00	2374	56.93	0.49	36.12(.000)	0.70	1.03
B	0.00	497	11.92	-0.25	-16.79(.000)	-0.44	0.86
C	0.00	428	10.26	-0.21	-13.84(.000)	-0.38	0.89
D	0.00	831	19.93	-0.22	-14.36(.000)	-0.18	0.93

Item 10

```

-----
item:10 (r3q10)
Cases for this item  4170  Discrimination  0.54
Item Threshold(s):  -0.62  Weighted MNSQ  0.92
Item Delta(s):      -0.62
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	32	0.77	-0.07	-4.84(.000)	-0.81	1.03
A	1.00	2775	66.55	0.54	41.18(.000)	0.64	1.01
B	0.00	336	8.06	-0.28	-18.95(.000)	-0.67	0.88
C	0.00	248	5.95	-0.28	-18.93(.000)	-0.82	0.77
D	0.00	779	18.68	-0.27	-17.87(.000)	-0.31	0.81

Item 11

```

-----
item:11 (r3q11)
Cases for this item  4170  Discrimination  0.54
Item Threshold(s):  -0.34  Weighted MNSQ  0.92
Item Delta(s):      -0.34
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	50	1.20	-0.09	-6.08(.000)	-0.66	0.99
A	0.00	295	7.07	-0.21	-14.15(.000)	-0.52	0.93
B	0.00	418	10.02	-0.30	-20.32(.000)	-0.64	0.86
C	0.00	843	20.22	-0.27	-18.05(.000)	-0.29	0.89
D	1.00	2564	61.49	0.54	41.55(.000)	0.69	0.98

Item 12

```

-----
item:12 (r3ql2)
Cases for this item  4169  Discrimination  0.41
Item Threshold(s):  0.51  Weighted MNSQ  1.06
Item Delta(s):      0.51
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	12	0.29	-0.04	-2.73(.006)	-0.93	1.04
A	1.00	1863	44.69	0.41	29.42(.000)	0.73	1.07
B	0.00	602	14.44	-0.12	-8.10(.000)	-0.05	0.98
C	0.00	936	22.45	-0.05	-3.22(.001)	0.16	0.99
D	0.00	756	18.13	-0.36	-25.04(.000)	-0.52	0.78

Item 13

```

-----
item:13 (r3ql3)
Cases for this item  4168  Discrimination  0.46
Item Threshold(s):  1.08  Weighted MNSQ  1.00
Item Delta(s):      1.08
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.78(.076)	-2.25	0.00
9	0.00	51	1.22	-0.06	-3.93(.000)	-0.42	0.98
A	0.00	1133	27.18	-0.23	-15.15(.000)	-0.12	0.90
B	0.00	1135	27.23	-0.11	-6.82(.000)	0.07	1.05
C	0.00	433	10.39	-0.20	-13.20(.000)	-0.36	0.87
D	1.00	1415	33.95	0.46	33.21(.000)	0.93	1.02

Item 14

```

-----
item:14 (r3ql4)
Cases for this item  4157  Discrimination  0.33
Item Threshold(s):  0.80  Weighted MNSQ  1.15
Item Delta(s):      0.80
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.64(.522)	-0.49	0.00
9	0.00	116	2.79	-0.05	-3.53(.000)	-0.10	0.89
A	0.00	929	22.35	-0.17	-11.00(.000)	-0.09	1.02
B	0.00	932	22.42	-0.06	-3.97(.000)	0.13	1.04
C	0.00	554	13.33	-0.16	-10.65(.000)	-0.14	1.01
D	1.00	1625	39.09	0.33	22.41(.000)	0.70	1.06

Item 15

```

-----
item:15 (r3ql5)
Cases for this item  4154  Discrimination  0.45
Item Threshold(s):  0.02  Weighted MNSQ  1.03
Item Delta(s):      0.02
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.02	-1.08(.281)	-0.50	1.67
9	0.00	66	1.59	-0.09	-6.10(.000)	-0.60	1.15
A	0.00	587	14.13	-0.29	-19.21(.000)	-0.46	1.01
B	0.00	575	13.84	-0.18	-11.49(.000)	-0.18	0.95
C	1.00	2264	54.50	0.45	32.61(.000)	0.69	1.03
D	0.00	659	15.86	-0.14	-9.35(.000)	-0.08	0.84

Item 16

```

-----
item:16 (r3ql6)
Cases for this item  4150  Discrimination  0.45
Item Threshold(s):  -0.97  Weighted MNSQ  1.00
Item Delta(s):      -0.97

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	45	1.08	-0.11	-6.88(.000)	-0.86	0.85
A	0.00	474	11.42	-0.23	-15.53(.000)	-0.40	0.89
B	1.00	3022	72.82	0.45	32.48(.000)	0.55	1.04
C	0.00	290	6.99	-0.27	-17.87(.000)	-0.70	0.74
D	0.00	319	7.69	-0.17	-11.44(.000)	-0.37	0.86

Item 17

```

-----
item:17 (r3ql7)
Cases for this item  4149  Discrimination  0.42
Item Threshold(s):   0.13  Weighted MNSQ  1.06
Item Delta(s):      0.13

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	53	1.28	-0.11	-6.88(.000)	-0.75	1.03
A	0.00	565	13.62	-0.23	-14.89(.000)	-0.32	0.84
B	1.00	2175	52.42	0.42	30.04(.000)	0.68	1.10
C	0.00	601	14.49	-0.21	-13.78(.000)	-0.26	0.95
D	0.00	755	18.20	-0.13	-8.13(.000)	-0.01	0.85

Item 18

```

-----
item:18 (r3ql8)
Cases for this item  4149  Discrimination  0.38
Item Threshold(s):   0.82  Weighted MNSQ  1.09
Item Delta(s):      0.82

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.64(.520)	0.12	0.00
9	0.00	44	1.06	-0.09	-6.04(.000)	-0.73	0.96
A	0.00	1266	30.51	-0.11	-7.04(.000)	0.07	0.93
B	0.00	382	9.21	-0.29	-19.51(.000)	-0.63	0.83
C	0.00	846	20.39	-0.10	-6.31(.000)	0.05	0.90
D	1.00	1610	38.80	0.38	26.07(.000)	0.77	1.14

Item 19

```

-----
item:19 (r3ql9)
Cases for this item  4146  Discrimination  0.50
Item Threshold(s):  -1.07  Weighted MNSQ  0.93
Item Delta(s):     -1.07

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.21(.027)	-2.15	0.00
9	0.00	50	1.21	-0.09	-5.96(.000)	-0.67	1.11
A	1.00	3088	74.48	0.50	37.23(.000)	0.56	1.02
B	0.00	388	9.36	-0.32	-22.07(.000)	-0.76	0.74
C	0.00	262	6.32	-0.26	-17.37(.000)	-0.77	0.77
D	0.00	357	8.61	-0.18	-11.62(.000)	-0.28	0.78

Item 20

```

-----
item:20 (r3q20)
Cases for this item  4132  Discrimination  0.32
Item Threshold(s):  1.72  Weighted MNSQ  1.06
Item Delta(s):      1.72
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	54	1.31	-0.07	-4.60(.000)	-0.49	1.15
A	0.00	977	23.64	-0.14	-8.76(.000)	0.02	0.99
B	0.00	887	21.47	-0.13	-8.20(.000)	0.02	1.04
C	0.00	1245	30.13	-0.04	-2.55(.011)	0.20	0.95
D	1.00	969	23.45	0.32	21.72(.000)	0.88	1.18

Item 21

```

-----
item:21 (r3q21)
Cases for this item  4126  Discrimination  0.55
Item Threshold(s):  -0.47  Weighted MNSQ  0.91
Item Delta(s):      -0.47
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.02	-1.20(.230)	-0.58	0.35
9	0.00	53	1.28	-0.08	-5.38(.000)	-0.59	1.10
A	0.00	548	13.28	-0.27	-17.73(.000)	-0.41	0.84
B	1.00	2642	64.03	0.55	42.68(.000)	0.69	0.99
C	0.00	447	10.83	-0.29	-19.22(.000)	-0.57	0.87
D	0.00	433	10.49	-0.25	-16.51(.000)	-0.43	0.80

Item 22

```

-----
item:22 (r3q22)
Cases for this item  4121  Discrimination  0.53
Item Threshold(s):  -0.28  Weighted MNSQ  0.94
Item Delta(s):      -0.28
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	46	1.12	-0.07	-4.29(.000)	-0.43	1.14
A	1.00	2496	60.57	0.53	40.41(.000)	0.70	1.02
B	0.00	525	12.74	-0.30	-19.95(.000)	-0.50	0.75
C	0.00	372	9.03	-0.25	-16.35(.000)	-0.53	0.80
D	0.00	682	16.55	-0.23	-14.84(.000)	-0.24	0.91

Item 23

```

-----
item:23 (r3q23)
Cases for this item  4117  Discrimination  0.50
Item Threshold(s):  -1.14  Weighted MNSQ  0.91
Item Delta(s):      -1.14
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.03	-2.02(.043)	-0.95	1.20
9	0.00	46	1.12	-0.09	-5.72(.000)	-0.66	0.89
A	0.00	303	7.36	-0.34	-23.46(.000)	-0.94	0.75
B	1.00	3114	75.64	0.50	36.59(.000)	0.55	1.00
C	0.00	234	5.68	-0.27	-17.77(.000)	-0.83	0.69
D	0.00	417	10.13	-0.17	-11.01(.000)	-0.22	0.95

Item 24

```

-----
item:24 (r3q24)
Cases for this item  4109  Discrimination  0.50
Item Threshold(s):  0.51  Weighted MNSQ  0.97
Item Delta(s):      0.50

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.78(.075)	-2.25	0.00
9	0.00	42	1.02	-0.09	-5.75(.000)	-0.76	1.11
A	1.00	1852	45.07	0.50	36.93(.000)	0.84	1.05
B	0.00	1526	37.14	-0.28	-18.39(.000)	-0.10	0.87
C	0.00	284	6.91	-0.23	-14.93(.000)	-0.57	0.92
D	0.00	404	9.83	-0.16	-10.52(.000)	-0.23	0.86

Item 25

```

-----
item:25 (r3q25)
Cases for this item  4103  Discrimination  0.41
Item Threshold(s):  0.31  Weighted MNSQ  1.07
Item Delta(s):      0.31

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.32(.188)	-0.90	1.13
9	0.00	77	1.88	-0.05	-3.46(.001)	-0.24	0.99
A	0.00	1022	24.91	-0.20	-12.81(.000)	-0.09	0.94
B	1.00	2008	48.94	0.41	28.75(.000)	0.71	1.06
C	0.00	545	13.28	-0.21	-13.73(.000)	-0.27	0.92
D	0.00	449	10.94	-0.13	-8.48(.000)	-0.13	1.02

Item 26

```

-----
item:26 (r3q26)
Cases for this item  4081  Discrimination  0.05
Item Threshold(s):  2.03  Weighted MNSQ  1.28
Item Delta(s):      2.03

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.78(.075)	-1.70	0.00
9	0.00	80	1.96	-0.09	-5.64(.000)	-0.41	0.95
A	0.00	652	15.98	-0.14	-9.04(.000)	-0.05	1.00
B	0.00	2044	50.09	0.24	15.58(.000)	0.51	1.02
C	1.00	783	19.19	0.05	3.43(.001)	0.40	1.25
D	0.00	521	12.77	-0.23	-14.85(.000)	-0.34	0.87

Item 27

```

-----
item:27 (r3q27)
Cases for this item  4067  Discrimination  0.43
Item Threshold(s):  0.72  Weighted MNSQ  1.04
Item Delta(s):      0.72

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.02	-1.36(.175)	-1.10	0.00
9	0.00	65	1.60	-0.07	-4.28(.000)	-0.35	1.04
A	0.00	644	15.83	-0.34	-23.41(.000)	-0.53	0.88
B	0.00	496	12.20	-0.24	-15.88(.000)	-0.39	0.87
C	1.00	1670	41.06	0.43	30.26(.000)	0.80	1.06
D	0.00	1191	29.28	0.01	0.37(.708)	0.28	0.89

Item 28

```

-----
item:28 (r3q28)
Cases for this item  4054  Discrimination  0.46
Item Threshold(s):  0.27  Weighted MNSQ  1.01
Item Delta(s):      0.26
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	73	1.80	-0.06	-4.13(.000)	-0.30	0.92
A	0.00	809	19.96	-0.12	-7.81(.000)	0.03	1.00
B	0.00	560	13.81	-0.29	-19.11(.000)	-0.45	0.90
C	1.00	2026	49.98	0.46	33.31(.000)	0.75	1.03
D	0.00	586	14.45	-0.21	-13.96(.000)	-0.26	0.83

Item 29

```

-----
item:29 (r3q29)
Cases for this item  4038  Discrimination  0.29
Item Threshold(s):  1.72  Weighted MNSQ  1.10
Item Delta(s):      1.72
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.03	-1.61(.108)	-0.82	0.48
9	0.00	74	1.83	-0.07	-4.18(.000)	-0.25	1.00
A	0.00	766	18.97	-0.18	-11.52(.000)	-0.11	0.90
B	0.00	842	20.85	-0.18	-11.83(.000)	-0.07	0.94
C	0.00	1396	34.57	0.06	4.00(.000)	0.36	1.06
D	1.00	957	23.70	0.29	19.36(.000)	0.83	1.18

Item 30

```

-----
item:30 (r3q30)
Cases for this item  4027  Discrimination  0.28
Item Threshold(s):  1.84  Weighted MNSQ  1.08
Item Delta(s):      1.84
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.20(.028)	-2.75	0.00
9	0.00	72	1.79	-0.07	-4.53(.000)	-0.30	1.17
A	0.00	2202	54.68	0.05	3.04(.002)	0.31	0.96
B	0.00	373	9.26	-0.23	-14.66(.000)	-0.42	0.99
C	0.00	497	12.34	-0.19	-12.51(.000)	-0.24	0.89
D	1.00	882	21.90	0.28	18.37(.000)	0.84	1.23

Item 31

```

-----
item:31 (r3q31)
Cases for this item  4019  Discrimination  0.54
Item Threshold(s):  1.55  Weighted MNSQ  0.88
Item Delta(s):      1.55
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2743	68.25	-0.46	-32.71(.000)	-0.03	0.96
1	1.00	1054	26.23	0.54	40.85(.000)	1.21	0.92
9	0.00	222	5.52	-0.11	-6.92(.000)	-0.25	0.88

Item 32

```

-----
item:32 (r3q32)
Cases for this item  3950  Discrimination  0.51
Item Threshold(s):  0.23  Weighted MNSQ  0.96
Item Delta(s):      0.23
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	86	2.18	-0.05	-3.05(.002)	-0.12	1.00
A	0.00	556	14.08	-0.32	-21.42(.000)	-0.51	0.95
B	0.00	919	23.27	-0.28	-18.41(.000)	-0.22	0.83
C	1.00	2011	50.91	0.51	37.45(.000)	0.80	1.04
D	0.00	378	9.57	-0.06	-3.82(.000)	0.05	0.86

Item 33

```

-----
item:33 (r3q33)
Cases for this item  3911  Discrimination  0.51
Item Threshold(s):  0.83  Weighted MNSQ  0.95
Item Delta(s):      0.83
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	9	0.23	-0.01	-0.62(.535)	0.06	1.14
9	0.00	68	1.74	-0.05	-3.42(.001)	-0.19	1.07
A	0.00	1126	28.79	-0.03	-1.81(.071)	0.22	0.90
B	1.00	1531	39.15	0.51	37.33(.000)	0.95	1.02
C	0.00	302	7.72	-0.15	-9.21(.000)	-0.22	0.93
D	0.00	875	22.37	-0.46	-32.15(.000)	-0.57	0.77

Item 34

```

-----
item:34 (r3q34)
Cases for this item  3900  Discrimination  0.55
Item Threshold(s):  1.14  Weighted MNSQ  0.90
Item Delta(s):      1.14
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2509	64.33	-0.51	-37.01(.000)	-0.10	0.96
1	1.00	1301	33.36	0.55	40.89(.000)	1.09	0.91
9	0.00	90	2.31	-0.09	-5.87(.000)	-0.38	0.94

Item 35

```

-----
item:35 (r3q35)
Cases for this item  3864  Discrimination  0.24
Item Threshold(s):  0.62  Weighted MNSQ  1.27
Item Delta(s):      0.61
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.00	-0.02(.983)	0.79	0.95
9	0.00	81	2.10	-0.02	-1.08(.280)	0.14	0.96
A	0.00	993	25.70	-0.00	-0.01(.994)	0.29	1.06
B	0.00	562	14.54	-0.23	-14.68(.000)	-0.29	1.03
C	0.00	551	14.26	-0.10	-6.02(.000)	0.04	1.03
D	1.00	1675	43.35	0.24	15.15(.000)	0.58	1.08

Item 36

item:36 (r3q36)Cases for this item 3825 Discrimination 0.25
Item Threshold(s): 1.98 Weighted MNSQ 1.13
Item Delta(s): 1.99

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	14	0.37	-0.01	-0.90(.367)	-0.05	0.68
A	0.00	627	16.39	-0.22	-14.08(.000)	-0.21	0.92
B	0.00	1994	52.13	0.11	7.10(.000)	0.40	1.02
C	0.00	419	10.95	-0.24	-15.35(.000)	-0.39	1.03
D	1.00	771	20.16	0.25	16.14(.000)	0.82	1.15

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 1.93% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4181
Mean	19.48
Standard Deviation	7.06
Variance	49.87
Skewness	-0.01
Kurtosis	-0.78
Standard error of mean	0.11
Standard error of measurement	2.56
Coefficient Alpha	0.87

=====

Appendix B.4 Year 3 Spelling

=====
 NAPLAN 2013, Calibration, Grade 3, Spelling
 GENERALISED ITEM ANALYSIS
 =====

Item 1

item:1 (lc3q01)
 Cases for this item 4194 Discrimination 0.43
 Item Threshold(s): -4.31 Weighted MNSQ 0.88
 Item Delta(s): -4.31

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.95(.343)	-2.33	0.00
9	0.00	9	0.21	-0.07	-4.54(.000)	-4.32	2.27
A	0.00	172	4.10	-0.32	-21.98(.000)	-4.02	1.64
B	1.00	3881	92.54	0.43	31.10(.000)	0.32	2.09
C	0.00	79	1.88	-0.20	-13.14(.000)	-3.28	1.39
D	0.00	52	1.24	-0.18	-11.62(.000)	-4.05	1.32

Item 2

item:2 (lc3q02)
 Cases for this item 4194 Discrimination 0.46
 Item Threshold(s): -3.55 Weighted MNSQ 1.02
 Item Delta(s): -3.56

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.40(.016)	-5.55	1.30
9	0.00	31	0.74	-0.09	-6.11(.000)	-2.71	2.16
A	0.00	115	2.74	-0.22	-14.37(.000)	-3.25	1.81
B	0.00	150	3.58	-0.25	-16.51(.000)	-3.12	2.01
C	1.00	3712	88.51	0.46	33.99(.000)	0.42	2.04
D	0.00	184	4.39	-0.28	-19.16(.000)	-3.22	1.76

Item 3

item:3 (lc3q03)
 Cases for this item 4193 Discrimination 0.49
 Item Threshold(s): -3.38 Weighted MNSQ 1.00
 Item Delta(s): -3.38

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.01	-0.51(.608)	-1.53	3.89
9	0.00	52	1.24	-0.06	-4.18(.000)	-1.47	2.28
A	1.00	3664	87.38	0.49	36.78(.000)	0.46	2.03
B	0.00	184	4.39	-0.29	-19.64(.000)	-3.19	1.51
C	0.00	138	3.29	-0.25	-16.91(.000)	-3.22	1.52
D	0.00	153	3.65	-0.28	-18.75(.000)	-3.52	1.69

Item 4

item:4 (lc3q04)
 Cases for this item 4193 Discrimination 0.59
 Item Threshold(s): -2.21 Weighted MNSQ 1.03
 Item Delta(s): -2.21

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	896	21.37	-0.58	-45.99(.000)	-2.50	1.75
1	1.00	3260	77.75	0.59	47.46(.000)	0.73	1.93
9	0.00	37	0.88	-0.09	-5.92(.000)	-3.02	1.81

Item 5

item:5 (lc3q05)
 Cases for this item 4172 Discrimination 0.62
 Item Threshold(s): -1.67 Weighted MNSQ 1.01

Item Delta(s): -1.67

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1100	26.37	-0.60	-48.42(.000)	-2.21	1.83
1	1.00	3017	72.32	0.62	51.04(.000)	0.89	1.85
9	0.00	55	1.32	-0.11	-7.47(.000)	-2.69	1.80

Item 6

item:6 (lc3q06)

Cases for this item 4166 Discrimination 0.63
 Item Threshold(s): -1.39 Weighted MNSQ 1.00
 Item Delta(s): -1.39

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1239	29.74	-0.62	-50.74(.000)	-2.09	1.84
1	1.00	2883	69.20	0.63	52.96(.000)	0.98	1.81
9	0.00	44	1.06	-0.10	-6.56(.000)	-2.46	1.93

Item 7

item:7 (lc3q07)

Cases for this item 4164 Discrimination 0.67
 Item Threshold(s): -1.34 Weighted MNSQ 0.92
 Item Delta(s): -1.34

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1250	30.02	-0.65	-55.43(.000)	-2.14	1.75
1	1.00	2858	68.64	0.67	58.95(.000)	1.04	1.78
9	0.00	56	1.34	-0.12	-8.06(.000)	-2.87	1.58

Item 8

item:8 (lc3q08)

Cases for this item 4158 Discrimination 0.65
 Item Threshold(s): -1.11 Weighted MNSQ 1.04
 Item Delta(s): -1.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1360	32.71	-0.62	-50.77(.000)	-1.91	1.82
1	1.00	2740	65.90	0.65	54.73(.000)	1.07	1.81
9	0.00	58	1.39	-0.14	-9.20(.000)	-2.88	1.70

Item 9

item:9 (lc3q09)

Cases for this item 4153 Discrimination 0.69
 Item Threshold(s): -0.88 Weighted MNSQ 0.93
 Item Delta(s): -0.88

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1490	35.88	-0.67	-58.87(.000)	-1.91	1.75
1	1.00	2615	62.97	0.69	61.80(.000)	1.20	1.73
9	0.00	48	1.16	-0.10	-6.51(.000)	-2.57	1.84

Item 10

```

-----
item:10 (lc3q10)
Cases for this item  4135  Discrimination  0.62
Item Threshold(s):  0.01  Weighted MNSQ  1.16
Item Delta(s):      0.01

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1949	47.13	-0.59	-46.51(.000)	-1.27	1.95
1	1.00	2114	51.12	0.62	50.47(.000)	1.37	1.79
9	0.00	72	1.74	-0.12	-7.98(.000)	-2.40	1.80

Item 11

```

-----
item:11 (lc3q11)
Cases for this item  4130  Discrimination  0.69
Item Threshold(s):  0.55  Weighted MNSQ  0.96
Item Delta(s):      0.55

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2290	55.45	-0.67	-57.63(.000)	-1.21	1.86
1	1.00	1802	43.63	0.69	60.44(.000)	1.73	1.63
9	0.00	38	0.92	-0.08	-5.34(.000)	-2.04	1.89

Item 12

```

-----
item:12 (lc3q12)
Cases for this item  4127  Discrimination  0.65
Item Threshold(s):  1.65  Weighted MNSQ  0.91
Item Delta(s):      1.65

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2856	69.20	-0.61	-49.55(.000)	-0.79	1.92
1	1.00	1199	29.05	0.65	54.66(.000)	2.23	1.58
9	0.00	72	1.74	-0.09	-6.04(.000)	-1.73	1.87

Item 13

```

-----
item:13 (lc3q13)
Cases for this item  4122  Discrimination  0.56
Item Threshold(s):  2.04  Weighted MNSQ  1.06
Item Delta(s):      2.04

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2992	72.59	-0.50	-36.71(.000)	-0.58	2.01
1	1.00	1011	24.53	0.56	43.44(.000)	2.19	1.72
9	0.00	119	2.89	-0.12	-7.61(.000)	-1.61	1.91

Item 14

```

-----
item:14 (lc3q14)
Cases for this item  4113  Discrimination  0.56
Item Threshold(s):  1.80  Weighted MNSQ  1.09
Item Delta(s):      1.81

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2888	70.22	-0.51	-37.64(.000)	-0.63	2.00
1	1.00	1120	27.23	0.56	43.26(.000)	2.06	1.79
9	0.00	105	2.55	-0.11	-7.15(.000)	-1.60	1.69

Item 15

```

-----
item:15 (lc3q15)
Cases for this item  4103  Discrimination  0.65
Item Threshold(s):  -0.59  Weighted MNSQ  1.04
Item Delta(s):      -0.59
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1575	38.39	-0.62	-50.12(.000)	-1.59	1.87
1	1.00	2450	59.71	0.65	55.46(.000)	1.24	1.75
9	0.00	78	1.90	-0.16	-10.14(.000)	-2.67	1.68

Item 16

```

-----
item:16 (lc3q16)
Cases for this item  4069  Discrimination  0.68
Item Threshold(s):   0.03  Weighted MNSQ  0.99
Item Delta(s):      0.03
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1866	45.86	-0.63	-51.95(.000)	-1.32	1.81
1	1.00	2093	51.44	0.68	59.36(.000)	1.51	1.70
9	0.00	110	2.70	-0.16	-10.29(.000)	-2.24	1.73

Item 17

```

-----
item:17 (lc3q17)
Cases for this item  4041  Discrimination  0.62
Item Threshold(s):  -0.02  Weighted MNSQ  1.12
Item Delta(s):      -0.02
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1744	43.16	-0.56	-43.35(.000)	-1.24	1.88
1	1.00	2122	52.51	0.62	50.67(.000)	1.40	1.77
9	0.00	175	4.33	-0.16	-10.19(.000)	-1.65	1.77

Item 18

```

-----
item:18 (lc3q18)
Cases for this item  4018  Discrimination  0.70
Item Threshold(s):   1.02  Weighted MNSQ  0.87
Item Delta(s):      1.02
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2400	59.73	-0.66	-55.20(.000)	-0.98	1.81
1	1.00	1526	37.98	0.70	62.16(.000)	2.02	1.55
9	0.00	92	2.29	-0.12	-7.57(.000)	-1.66	1.43

Item 19

```

-----
item:19 (lc3q19)
Cases for this item  3998  Discrimination  0.64
Item Threshold(s):   0.79  Weighted MNSQ  1.04
Item Delta(s):      0.79
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2169	54.25	-0.59	-46.54(.000)	-0.98	1.88
1	1.00	1654	41.37	0.64	52.89(.000)	1.77	1.68
9	0.00	175	4.38	-0.10	-6.41(.000)	-0.99	1.80

Item 20

```

-----
item:20 (lc3q20)
Cases for this item  3957  Discrimination  0.68
Item Threshold(s):  0.77  Weighted MNSQ  0.96
Item Delta(s):      0.77

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2176	54.99	-0.63	-50.84(.000)	-1.00	1.85
1	1.00	1658	41.90	0.68	57.90(.000)	1.85	1.59
9	0.00	123	3.11	-0.12	-7.83(.000)	-1.41	1.70

Item 21

```

-----
item:21 (lc3q21)
Cases for this item  3930  Discrimination  0.67
Item Threshold(s):  1.20  Weighted MNSQ  0.93
Item Delta(s):      1.21

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2401	61.09	-0.62	-48.90(.000)	-0.81	1.86
1	1.00	1419	36.11	0.67	56.38(.000)	2.05	1.56
9	0.00	110	2.80	-0.13	-8.17(.000)	-1.49	1.63

Item 22

```

-----
item:22 (lc3q22)
Cases for this item  3898  Discrimination  0.64
Item Threshold(s):  1.48  Weighted MNSQ  0.95
Item Delta(s):      1.48

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2499	64.11	-0.58	-44.91(.000)	-0.69	1.88
1	1.00	1273	32.66	0.64	51.47(.000)	2.12	1.65
9	0.00	126	3.23	-0.10	-6.45(.000)	-1.02	1.59

Item 23

```

-----
item:23 (lc3q23)
Cases for this item  3852  Discrimination  0.58
Item Threshold(s):  2.34  Weighted MNSQ  0.95
Item Delta(s):      2.34

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2848	73.94	-0.51	-36.47(.000)	-0.42	1.93
1	1.00	866	22.48	0.58	44.33(.000)	2.56	1.56
9	0.00	138	3.58	-0.11	-6.79(.000)	-1.02	1.82

Item 24

```

-----
item:24 (lc3q24)
Cases for this item  3795  Discrimination  0.50
Item Threshold(s):  2.88  Weighted MNSQ  1.03
Item Delta(s):      2.88

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3021	79.60	-0.45	-30.97(.000)	-0.24	2.01
1	1.00	657	17.31	0.50	35.30(.000)	2.63	1.67
9	0.00	117	3.08	-0.04	-2.55(.011)	-0.26	1.87

Item 25

```

-----
item:25 (lc3q25)
Cases for this item  3738  Discrimination  0.42
Item Threshold(s):  3.90  Weighted MNSQ  1.00
Item Delta(s):      3.90
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3269	87.45	-0.32	-20.30(.000)	-0.01	2.06
1	1.00	362	9.68	0.42	28.37(.000)	3.23	1.58
9	0.00	107	2.86	-0.12	-7.42(.000)	-1.12	1.66

```

-----
The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 3.09% of the data are missing.
-----

```

The following results are scaled to assume that a single response was provided for each item.

```

N 4194
Mean 12.59
Standard Deviation 6.68
Variance 44.67
Skewness -0.02
Kurtosis -1.01
Standard error of mean 0.10
Standard error of measurement 1.90
Coefficient Alpha 0.92
-----

```

Appendix B.5 Year 5 G&P

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NAPLAN 2013, Calibration, Grade 5, GP
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (lc5q26)
Cases for this item 4497 Discrimination 0.34
Item Threshold(s): -3.24 Weighted MNSQ 0.91
Item Delta(s): -3.24

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.33(.020)	-2.28	0.00
9	0.00	17	0.38	-0.11	-7.19(.000)	-0.82	1.14
A	1.00	4362	97.00	0.34	24.60(.000)	0.83	1.05
B	0.00	68	1.51	-0.24	-16.83(.000)	-1.16	0.82
C	0.00	37	0.82	-0.19	-12.81(.000)	-1.34	0.78
D	0.00	12	0.27	-0.10	-6.59(.000)	-1.19	0.73

=====

Item 2

item:2 (lc5q27)
Cases for this item 4497 Discrimination 0.45
Item Threshold(s): -1.69 Weighted MNSQ 0.91
Item Delta(s): -1.69

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	26	0.58	-0.13	-8.60(.000)	-0.65	1.17
A	0.00	166	3.69	-0.28	-19.76(.000)	-0.61	0.92
B	0.00	56	1.25	-0.19	-12.66(.000)	-0.86	0.93
C	1.00	3984	88.59	0.45	33.73(.000)	0.93	1.02
D	0.00	265	5.89	-0.25	-17.46(.000)	-0.18	0.85

=====

Item 3

item:3 (lc5q28)
Cases for this item 4495 Discrimination 0.45
Item Threshold(s): -0.87 Weighted MNSQ 0.98
Item Delta(s): -0.87

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	26	0.58	-0.13	-9.05(.000)	-0.86	0.91
A	0.00	613	13.64	-0.26	-17.77(.000)	0.18	0.90
B	1.00	3565	79.31	0.45	33.48(.000)	0.99	1.02
C	0.00	133	2.96	-0.27	-18.79(.000)	-0.76	0.84
D	0.00	158	3.52	-0.20	-13.81(.000)	-0.24	0.89

=====

Item 4

item:4 (lc5q29)
Cases for this item 4495 Discrimination 0.51
Item Threshold(s): 0.11 Weighted MNSQ 0.98
Item Delta(s): 0.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	19	0.42	-0.11	-7.20(.000)	-0.59	0.89
A	0.00	1494	33.24	-0.39	-28.36(.000)	0.24	0.89
B	0.00	79	1.76	-0.22	-15.23(.000)	-0.68	0.80
C	1.00	2843	63.25	0.51	39.33(.000)	1.15	1.00
D	0.00	60	1.33	-0.21	-14.56(.000)	-1.10	0.99

=====

Item 5

item:5 (lc5q30)
Cases for this item 4492 Discrimination 0.43
Item Threshold(s): -2.37 Weighted MNSQ 0.87
Item Delta(s): -2.37

```
-----
```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	23	0.51	-0.12	-8.07(.000)	-0.65	1.06
A	1.00	4199	93.48	0.43	32.32(.000)	0.89	1.02
B	0.00	153	3.41	-0.28	-19.90(.000)	-0.65	0.88
C	0.00	49	1.09	-0.18	-12.13(.000)	-0.92	0.89
D	0.00	68	1.51	-0.23	-16.14(.000)	-1.23	0.82

```
=====
```

Item 6

```
-----
item:6 (lc5q31)
Cases for this item 4491 Discrimination 0.31
Item Threshold(s): -1.42 Weighted MNSQ 1.05
Item Delta(s): -1.42
```

```
-----
```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	91	2.03	-0.08	-5.09(.000)	0.27	1.01
A	1.00	3863	86.02	0.31	21.58(.000)	0.90	1.05
B	0.00	293	6.52	-0.14	-9.15(.000)	0.27	1.00
C	0.00	109	2.43	-0.21	-14.22(.000)	-0.46	0.83
D	0.00	135	3.01	-0.18	-12.08(.000)	-0.19	1.14

```
=====
```

Item 7

```
-----
item:7 (lc5q32)
Cases for this item 4491 Discrimination 0.37
Item Threshold(s): -1.45 Weighted MNSQ 1.00
Item Delta(s): -1.44
```

```
-----
```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	52	1.16	-0.09	-6.12(.000)	-0.08	1.08
A	1.00	3875	86.28	0.37	26.52(.000)	0.91	1.03
B	0.00	361	8.04	-0.23	-16.08(.000)	0.07	1.01
C	0.00	150	3.34	-0.18	-12.17(.000)	-0.14	1.00
D	0.00	53	1.18	-0.20	-13.47(.000)	-1.04	1.03

```
=====
```

Item 8

```
-----
item:8 (lc5q33)
Cases for this item 4487 Discrimination 0.51
Item Threshold(s): -1.05 Weighted MNSQ 0.90
Item Delta(s): -1.05
```

```
-----
```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	26	0.58	-0.13	-9.06(.000)	-0.93	0.92
A	1.00	3671	81.81	0.51	40.02(.000)	1.01	1.00
B	0.00	240	5.35	-0.28	-19.46(.000)	-0.33	0.89
C	0.00	105	2.34	-0.24	-16.51(.000)	-0.74	0.84
D	0.00	445	9.92	-0.30	-20.81(.000)	-0.08	0.80

```
=====
```

Item 9

```

-----
item:9 (lc5q34)
Cases for this item  4479  Discrimination  0.49
Item Threshold(s):  -0.64  Weighted MNSQ  0.95
Item Delta(s):      -0.64

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.11	-0.01	-0.50(.615)	0.49	1.27
9	0.00	27	0.60	-0.12	-8.32(.000)	-0.84	0.91
A	0.00	516	11.52	-0.30	-21.27(.000)	-0.04	0.92
B	1.00	3414	76.22	0.49	37.86(.000)	1.05	1.00
C	0.00	433	9.67	-0.26	-18.16(.000)	-0.01	0.84
D	0.00	84	1.88	-0.19	-12.91(.000)	-0.46	0.98

Item 10

```

-----
item:10 (lc5q35)
Cases for this item  4473  Discrimination  0.40
Item Threshold(s):  -0.95  Weighted MNSQ  1.01
Item Delta(s):      -0.94

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.04(.002)	-1.69	1.05
9	0.00	43	0.96	-0.12	-8.31(.000)	-0.56	0.94
A	0.00	446	9.97	-0.19	-12.61(.000)	0.25	0.95
B	0.00	154	3.44	-0.24	-16.45(.000)	-0.45	0.98
C	1.00	3601	80.51	0.40	29.57(.000)	0.98	1.02
D	0.00	227	5.07	-0.22	-15.05(.000)	-0.12	0.96

Item 11

```

-----
item:11 (lc5q36)
Cases for this item  4471  Discrimination  0.53
Item Threshold(s):  -0.45  Weighted MNSQ  0.92
Item Delta(s):      -0.46

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	25	0.56	-0.09	-6.13(.000)	-0.47	0.71
9	0.00	33	0.74	-0.12	-8.11(.000)	-0.55	0.93
A	0.00	432	9.66	-0.30	-20.91(.000)	-0.06	0.89
B	0.00	181	4.05	-0.23	-15.63(.000)	-0.28	1.02
C	0.00	522	11.68	-0.26	-17.87(.000)	0.10	0.85
D	1.00	3278	73.32	0.53	41.47(.000)	1.09	0.99

Item 12

```

-----
item:12 (lc5q37)
Cases for this item  4471  Discrimination  0.45
Item Threshold(s):  -0.03  Weighted MNSQ  1.03
Item Delta(s):      -0.03

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.04	-2.36(.018)	-2.44	0.00
9	0.00	33	0.74	-0.12	-7.84(.000)	-0.65	0.92
A	0.00	141	3.15	-0.25	-17.31(.000)	-0.47	0.82
B	1.00	2951	66.00	0.45	33.31(.000)	1.09	1.00
C	0.00	452	10.11	-0.24	-16.55(.000)	0.11	0.98
D	0.00	893	19.97	-0.21	-14.46(.000)	0.38	0.97

Item 13

```

-----
item:13 (lc5q38)
Cases for this item  4461  Discrimination  0.58
Item Threshold(s):  -0.30  Weighted MNSQ  0.88
Item Delta(s):      -0.30
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.04	-2.36(.018)	-2.44	0.00
9	0.00	44	0.99	-0.10	-6.71(.000)	-0.27	1.11
A	1.00	3156	70.75	0.58	47.15(.000)	1.14	0.96
B	0.00	485	10.87	-0.31	-21.82(.000)	-0.08	0.93
C	0.00	378	8.47	-0.28	-19.52(.000)	-0.10	0.91
D	0.00	397	8.90	-0.27	-18.81(.000)	-0.01	0.75

Item 14

```

-----
item:14 (lc5q39)
Cases for this item  4458  Discrimination  0.52
Item Threshold(s):   0.05  Weighted MNSQ  0.95
Item Delta(s):      0.05
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	35	0.79	-0.10	-6.72(.000)	-0.39	0.95
A	0.00	580	13.01	-0.20	-13.40(.000)	0.29	0.96
B	0.00	529	11.87	-0.35	-24.94(.000)	-0.12	0.84
C	1.00	2878	64.56	0.52	40.66(.000)	1.16	0.99
D	0.00	436	9.78	-0.20	-13.92(.000)	0.20	0.89

Item 15

```

-----
item:15 (lc5q40)
Cases for this item  4454  Discrimination  0.47
Item Threshold(s):   0.12  Weighted MNSQ  1.00
Item Delta(s):      0.12
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	46	1.03	-0.10	-6.51(.000)	-0.16	1.02
A	0.00	606	13.61	-0.28	-19.78(.000)	0.07	0.95
B	1.00	2820	63.31	0.47	35.80(.000)	1.14	0.99
C	0.00	298	6.69	-0.24	-16.33(.000)	-0.04	0.97
D	0.00	684	15.36	-0.17	-11.49(.000)	0.40	0.92

Item 16

```

-----
item:16 (lc5q41)
Cases for this item  4451  Discrimination  0.47
Item Threshold(s):   0.47  Weighted MNSQ  1.02
Item Delta(s):      0.47
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.01	-0.71(.478)	0.48	0.93
9	0.00	63	1.42	-0.11	-7.32(.000)	-0.32	0.97
A	0.00	646	14.51	-0.25	-17.51(.000)	0.22	0.89
B	0.00	667	14.99	-0.28	-19.70(.000)	0.14	0.97
C	1.00	2516	56.53	0.47	35.19(.000)	1.19	1.00
D	0.00	556	12.49	-0.08	-5.59(.000)	0.57	0.96

Item 17

 item:17 (lc5q42)
 Cases for this item 4434 Discrimination 0.51
 Item Threshold(s): 0.29 Weighted MNSQ 0.97
 Item Delta(s): 0.29

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	23	0.52	-0.05	-3.31(.001)	0.10	1.26
A	0.00	1316	29.68	-0.30	-21.16(.000)	0.34	0.87
B	0.00	156	3.52	-0.27	-19.03(.000)	-0.56	0.85
C	1.00	2669	60.19	0.51	38.95(.000)	1.19	1.01
D	0.00	270	6.09	-0.23	-15.62(.000)	-0.04	0.82

Item 18

 item:18 (lc5q43)
 Cases for this item 4428 Discrimination 0.35
 Item Threshold(s): 1.11 Weighted MNSQ 1.11
 Item Delta(s): 1.11

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.04	-2.37(.018)	-2.44	0.00
9	0.00	43	0.97	-0.07	-4.78(.000)	-0.04	1.11
A	1.00	1938	43.77	0.35	24.82(.000)	1.19	1.09
B	0.00	659	14.88	-0.19	-13.08(.000)	0.36	0.93
C	0.00	1030	23.26	-0.08	-5.39(.000)	0.64	0.98
D	0.00	757	17.10	-0.17	-11.31(.000)	0.44	0.95

Item 19

 item:19 (lc5q44)
 Cases for this item 4417 Discrimination 0.53
 Item Threshold(s): 0.49 Weighted MNSQ 0.94
 Item Delta(s): 0.50

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	32	0.72	-0.10	-6.98(.000)	-0.28	0.66
9	0.00	18	0.41	-0.07	-4.82(.000)	-0.63	1.03
A	0.00	979	22.16	-0.33	-23.39(.000)	0.19	0.87
B	0.00	668	15.12	-0.23	-15.54(.000)	0.29	0.90
C	1.00	2481	56.17	0.53	41.82(.000)	1.26	0.99
D	0.00	239	5.41	-0.14	-9.29(.000)	0.21	0.91

Item 20

 item:20 (lc5q45)
 Cases for this item 4410 Discrimination 0.50
 Item Threshold(s): 0.93 Weighted MNSQ 0.97
 Item Delta(s): 0.93

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.04	-2.37(.018)	-2.44	0.00
9	0.00	41	0.93	-0.08	-5.37(.000)	0.05	1.02
A	0.00	403	9.14	-0.22	-15.22(.000)	0.16	0.93
B	0.00	1335	30.27	-0.26	-17.61(.000)	0.40	0.90
C	0.00	535	12.13	-0.18	-12.28(.000)	0.30	0.92
D	1.00	2095	47.51	0.50	38.35(.000)	1.33	1.00

Item 21

```

-----
item:21 (lc5q46)
Cases for this item  4405  Discrimination  0.42
Item Threshold(s):  1.27  Weighted MNSQ  1.04
Item Delta(s):      1.26

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.49(.626)	0.67	0.00
9	0.00	44	1.00	-0.04	-2.50(.012)	0.38	1.05
A	0.00	854	19.39	-0.13	-8.46(.000)	0.56	0.99
B	0.00	1060	24.06	-0.16	-10.54(.000)	0.51	0.92
C	1.00	1801	40.89	0.42	30.55(.000)	1.31	1.05
D	0.00	645	14.64	-0.24	-16.36(.000)	0.23	0.91

Item 22

```

-----
item:22 (lc5q47)
Cases for this item  4397  Discrimination  0.32
Item Threshold(s):  1.41  Weighted MNSQ  1.14
Item Delta(s):      1.40

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.91(.365)	-0.02	0.00
9	0.00	148	3.37	-0.03	-1.95(.051)	0.64	0.86
A	0.00	1122	25.52	-0.19	-12.51(.000)	0.49	0.98
B	0.00	637	14.49	-0.10	-6.82(.000)	0.51	1.02
C	0.00	809	18.40	-0.08	-5.32(.000)	0.62	0.98
D	1.00	1680	38.21	0.32	22.05(.000)	1.23	1.09

Item 23

```

-----
item:23 (lc5q48)
Cases for this item  4382  Discrimination  0.39
Item Threshold(s):  1.78  Weighted MNSQ  1.04
Item Delta(s):      1.78

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.00	-0.07(.945)	0.28	0.00
9	0.00	46	1.05	-0.05	-3.37(.001)	0.37	0.99
A	0.00	2193	50.05	-0.12	-8.20(.000)	0.67	0.93
B	0.00	305	6.96	-0.25	-17.00(.000)	-0.10	0.99
C	0.00	468	10.68	-0.17	-11.38(.000)	0.34	0.99
D	1.00	1369	31.24	0.39	28.33(.000)	1.40	1.05

Item 24

```

-----
item:24 (lc5q49)
Cases for this item  4361  Discrimination  0.31
Item Threshold(s):  1.60  Weighted MNSQ  1.12
Item Delta(s):      1.60

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	22	0.50	-0.01	-0.63(.531)	0.76	1.20
A	0.00	211	4.84	-0.24	-16.34(.000)	-0.22	0.87
B	1.00	1510	34.63	0.31	21.57(.000)	1.24	1.13
C	0.00	1052	24.12	-0.16	-10.58(.000)	0.54	0.96
D	0.00	1566	35.91	-0.06	-3.83(.000)	0.71	0.95

Item 25

```

-----
item:25 (lc5q50)
Cases for this item  4356  Discrimination  0.31
Item Threshold(s):  1.90  Weighted MNSQ  1.11
Item Delta(s):      1.90
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	39	0.90	-0.03	-1.85(.064)	0.54	0.96
A	0.00	1104	25.34	-0.14	-9.13(.000)	0.57	0.95
B	0.00	1104	25.34	-0.16	-10.43(.000)	0.54	0.96
C	0.00	833	19.12	-0.03	-2.21(.027)	0.74	1.13
D	1.00	1276	29.29	0.31	21.90(.000)	1.31	1.08

Item 26

```

-----
item:26 (lc5q51)
Cases for this item  4345  Discrimination  0.33
Item Threshold(s):  2.93  Weighted MNSQ  1.00
Item Delta(s):      2.93
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.01	0.34(.731)	1.18	0.00
9	0.00	19	0.44	-0.03	-1.87(.061)	0.41	0.70
A	0.00	1142	26.28	0.07	4.73(.000)	0.93	1.04
B	0.00	2415	55.58	-0.22	-14.64(.000)	0.60	0.92
C	0.00	125	2.88	-0.24	-16.02(.000)	-0.53	0.99
D	1.00	643	14.80	0.33	23.11(.000)	1.67	1.13

```

-----
The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 1.13% of the data are missing.
-----

```

The following results are scaled to assume that a single response was provided for each item.

```

N 4497
Mean 16.24
Standard Deviation 4.83
Variance 23.32
Skewness -0.33
Kurtosis -0.39
Standard error of mean 0.07
Standard error of measurement 2.09
Coefficient Alpha 0.81
-----

```

Appendix B.6 Year 5 Numeracy

=====

NAPLAN 2013, Calibration, Grade 5, Numeracy
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (n5q01)
Cases for this item 4455 Discrimination 0.25
Item Threshold(s): -3.42 Weighted MNSQ 0.97
Item Delta(s): -3.42

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.02	-1.01(.312)	-1.06	2.07
9	0.00	6	0.13	-0.04	-2.92(.004)	-1.20	1.09
A	1.00	4234	95.04	0.25	17.07(.000)	0.07	1.06
B	0.00	68	1.53	-0.15	-9.99(.000)	-1.21	0.79
C	0.00	26	0.58	-0.10	-6.95(.000)	-1.41	0.85
D	0.00	119	2.67	-0.16	-10.84(.000)	-0.99	1.00

=====

Item 2

item:2 (n5q02)
Cases for this item 4455 Discrimination 0.27
Item Threshold(s): -2.50 Weighted MNSQ 1.02
Item Delta(s): -2.50

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	473	10.62	-0.26	-17.97(.000)	-0.78	1.02
1	1.00	3971	89.14	0.27	18.51(.000)	0.11	1.05
9	0.00	11	0.25	-0.06	-4.12(.000)	-1.16	0.71

=====

Item 3

item:3 (n5q03)
Cases for this item 4455 Discrimination 0.47
Item Threshold(s): -1.74 Weighted MNSQ 0.90
Item Delta(s): -1.74

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.02	1.17(.242)	0.63	0.00
9	0.00	7	0.16	-0.04	-2.86(.004)	-1.13	1.03
A	1.00	3600	80.81	0.47	36.00(.000)	0.24	1.01
B	0.00	39	0.88	-0.11	-7.56(.000)	-1.20	0.87
C	0.00	594	13.33	-0.37	-26.83(.000)	-0.93	0.83
D	0.00	214	4.80	-0.23	-15.45(.000)	-0.99	0.84

=====

Item 4

item:4 (n5q04)
Cases for this item 4455 Discrimination 0.45
Item Threshold(s): -1.79 Weighted MNSQ 0.92
Item Delta(s): -1.79

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	16	0.36	-0.05	-3.41(.001)	-0.85	1.02
A	1.00	3630	81.48	0.45	33.69(.000)	0.23	1.01
B	0.00	479	10.75	-0.30	-21.22(.000)	-0.89	0.87
C	0.00	217	4.87	-0.21	-14.64(.000)	-0.94	0.77
D	0.00	113	2.54	-0.20	-13.88(.000)	-1.28	0.78

=====

Item 5

item:5 (n5q05)
Cases for this item 4455 Discrimination 0.38
Item Threshold(s): -1.79 Weighted MNSQ 0.98
Item Delta(s): -1.79

```

-----
Label      Score      Count      % of tot  Pt Bis      t   (p)      PVI Avg:1  PVI SD:1
-----
0          0.00        806        18.09     -0.37     -26.34(.000) -0.77      0.97
1          1.00       3627        81.41      0.38      27.27(.000)  0.20      1.03
9          0.00         22         0.49     -0.08     -5.55(.000) -1.23      0.83
=====

```

Item 6

```

-----
item:6 (n5q06)
Cases for this item  4455  Discrimination  0.52
Item Threshold(s):  -1.46  Weighted MNSQ  0.88
Item Delta(s):      -1.46
-----

```

```

-----
Label      Score      Count      % of tot  Pt Bis      t   (p)      PVI Avg:1  PVI SD:1
-----
0          0.00        963        21.62     -0.48     -36.98(.000) -0.90      0.84
1          1.00       3423        76.84      0.52      40.11(.000)  0.30      0.99
9          0.00         69         1.55     -0.14     -9.72(.000) -1.20      0.76
=====

```

Item 7

```

-----
item:7 (n5q07)
Cases for this item  4453  Discrimination  0.48
Item Threshold(s):  -1.67  Weighted MNSQ  0.90
Item Delta(s):      -1.67
-----

```

```

-----
Label      Score      Count      % of tot  Pt Bis      t   (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         2         0.04     -0.03     -1.68(.094) -1.30      2.46
9          0.00         8         0.18     -0.05     -3.58(.000) -1.28      0.56
A          0.00        217         4.87     -0.17     -11.38(.000) -0.75      0.93
B          1.00       3558        79.90      0.48      36.02(.000)  0.25      1.00
C          0.00        570        12.80     -0.37     -26.82(.000) -0.95      0.82
D          0.00         98         2.20     -0.18     -12.39(.000) -1.24      0.79
=====

```

Item 8

```

-----
item:8 (n5q08)
Cases for this item  4452  Discrimination  0.57
Item Threshold(s):  -1.02  Weighted MNSQ  0.86
Item Delta(s):      -1.02
-----

```

```

-----
Label      Score      Count      % of tot  Pt Bis      t   (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         2         0.04     -0.02     -1.49(.137) -1.10      0.48
9          0.00        15         0.34     -0.07     -4.61(.000) -1.07      0.77
A          0.00        499        11.21     -0.30     -20.84(.000) -0.82      0.74
B          0.00        486        10.92     -0.31     -21.77(.000) -0.89      0.82
C          0.00        350         7.86     -0.25     -16.89(.000) -0.84      0.81
D          1.00       3100        69.63      0.57      46.07(.000)  0.39      0.98
=====

```

Item 9

```

-----
item:9 (n5q09)
Cases for this item  4452  Discrimination  0.43
Item Threshold(s):  -1.56  Weighted MNSQ  0.97
Item Delta(s):      -1.56

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.04	-2.56(.010)	-1.53	0.88
9	0.00	26	0.58	-0.08	-5.54(.000)	-1.23	0.94
A	0.00	125	2.81	-0.16	-10.79(.000)	-0.93	0.91
B	1.00	3487	78.32	0.43	31.38(.000)	0.24	1.02
C	0.00	624	14.02	-0.32	-22.73(.000)	-0.77	0.85
D	0.00	187	4.20	-0.15	-10.00(.000)	-0.73	1.01

Item 10

```

-----
item:10 (n5q10)
Cases for this item  4452  Discrimination  0.55
Item Threshold(s):  -0.86  Weighted MNSQ  0.88
Item Delta(s):      -0.86

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	10	0.22	-0.04	-2.77(.006)	-0.95	1.12
A	0.00	357	8.02	-0.22	-15.10(.000)	-0.75	0.87
B	1.00	2973	66.78	0.55	44.47(.000)	0.40	0.97
C	0.00	434	9.75	-0.19	-13.05(.000)	-0.56	0.90
D	0.00	678	15.23	-0.40	-28.79(.000)	-0.91	0.77

Item 11

```

-----
item:11 (n5q11)
Cases for this item  4452  Discrimination  0.43
Item Threshold(s):  -1.02  Weighted MNSQ  1.01
Item Delta(s):      -1.01

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	23	0.52	-0.08	-5.56(.000)	-1.18	0.77
A	0.00	198	4.45	-0.17	-11.33(.000)	-0.78	0.96
B	1.00	3097	69.56	0.43	31.65(.000)	0.30	1.05
C	0.00	1055	23.70	-0.33	-23.17(.000)	-0.57	0.85
D	0.00	79	1.77	-0.13	-8.78(.000)	-0.94	0.84

Item 12

```

-----
item:12 (n5q12)
Cases for this item  4452  Discrimination  0.45
Item Threshold(s):  -0.71  Weighted MNSQ  1.00
Item Delta(s):      -0.71

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.09	-0.01	-0.83(.406)	-0.75	0.88
9	0.00	15	0.34	-0.09	-5.88(.000)	-1.69	0.98
A	0.00	87	1.95	-0.14	-9.67(.000)	-1.03	0.91
B	0.00	1333	29.94	-0.35	-24.57(.000)	-0.51	0.95
C	0.00	164	3.68	-0.17	-11.71(.000)	-0.87	0.86
D	1.00	2849	63.99	0.45	33.65(.000)	0.35	1.01

Item 13

```

-----
item:13 (n5ql3)
Cases for this item  4452  Discrimination  0.39
Item Threshold(s):  -1.31  Weighted MNSQ  1.02
Item Delta(s):      -1.31

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	0.00	0.04(.971)	0.06	0.15
9	0.00	21	0.47	-0.04	-2.93(.003)	-0.73	1.16
A	0.00	125	2.81	-0.20	-13.56(.000)	-1.18	0.82
B	0.00	608	13.66	-0.30	-21.15(.000)	-0.76	0.90
C	0.00	378	8.49	-0.10	-6.90(.000)	-0.32	1.04
D	1.00	3318	74.53	0.39	27.95(.000)	0.25	1.02

Item 14

```

-----
item:14 (n5ql4)
Cases for this item  4449  Discrimination  0.39
Item Threshold(s):  -0.23  Weighted MNSQ  1.08
Item Delta(s):      -0.23

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	20	0.45	-0.04	-2.93(.003)	-0.65	1.06
9	0.00	13	0.29	-0.03	-2.04(.041)	-0.66	1.33
A	0.00	88	1.98	-0.14	-9.33(.000)	-0.97	0.95
B	1.00	2433	54.69	0.39	28.22(.000)	0.38	1.07
C	0.00	1696	38.12	-0.27	-18.94(.000)	-0.33	0.90
D	0.00	199	4.47	-0.18	-12.27(.000)	-0.85	0.95

Item 15

```

-----
item:15 (n5ql5)
Cases for this item  4449  Discrimination  0.51
Item Threshold(s):  -0.68  Weighted MNSQ  0.94
Item Delta(s):      -0.68

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	42	0.94	-0.05	-3.59(.000)	-0.60	1.12
A	0.00	186	4.18	-0.24	-16.13(.000)	-1.12	0.85
B	1.00	2823	63.45	0.51	39.81(.000)	0.41	1.00
C	0.00	750	16.86	-0.23	-15.59(.000)	-0.50	0.77
D	0.00	648	14.57	-0.31	-21.76(.000)	-0.74	0.86

Item 16

```

-----
item:16 (n5ql6)
Cases for this item  4448  Discrimination  0.47
Item Threshold(s):  -0.47  Weighted MNSQ  0.99
Item Delta(s):      -0.47

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	20	0.45	-0.04	-2.51(.012)	-0.75	1.27
A	1.00	2643	59.42	0.47	35.96(.000)	0.41	1.04
B	0.00	340	7.64	-0.31	-22.12(.000)	-1.08	0.74
C	0.00	983	22.10	-0.19	-13.03(.000)	-0.36	0.82
D	0.00	150	3.37	-0.15	-9.84(.000)	-0.71	0.87
E	0.00	312	7.01	-0.16	-10.85(.000)	-0.57	0.90

Item 17

```

-----
item:17 (n5q17)
Cases for this item  4448  Discrimination  0.39
Item Threshold(s):  -0.45  Weighted MNSQ  1.08
Item Delta(s):      -0.45
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	47	1.06	-0.05	-3.55(.000)	-0.60	1.03
A	0.00	287	6.45	-0.24	-16.43(.000)	-0.92	0.87
B	1.00	2624	58.99	0.39	28.60(.000)	0.35	1.07
C	0.00	1111	24.98	-0.23	-15.79(.000)	-0.38	0.84
D	0.00	379	8.52	-0.11	-7.19(.000)	-0.34	1.06

Item 18

```

-----
item:18 (n5q18)
Cases for this item  4448  Discrimination  0.42
Item Threshold(s):   0.08  Weighted MNSQ  1.06
Item Delta(s):      0.08
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.02	-1.63(.104)	-0.54	0.87
9	0.00	18	0.40	-0.05	-3.08(.002)	-0.74	1.24
A	1.00	2161	48.58	0.42	30.69(.000)	0.45	1.03
B	0.00	1749	39.32	-0.18	-12.39(.000)	-0.21	0.91
C	0.00	225	5.06	-0.16	-10.98(.000)	-0.69	1.02
D	0.00	115	2.59	-0.20	-13.87(.000)	-1.28	0.71
E	0.00	177	3.98	-0.25	-16.97(.000)	-1.20	0.68

Item 19

```

-----
item:19 (n5q19)
Cases for this item  4448  Discrimination  0.41
Item Threshold(s):   0.23  Weighted MNSQ  1.07
Item Delta(s):      0.24
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.58(.562)	0.04	0.00
9	0.00	21	0.47	-0.04	-2.84(.004)	-0.41	1.00
A	0.00	133	2.99	-0.18	-12.14(.000)	-1.00	0.79
B	0.00	402	9.04	-0.32	-22.80(.000)	-1.00	0.79
C	0.00	1874	42.13	-0.15	-10.39(.000)	-0.18	0.88
D	1.00	2017	45.35	0.41	29.67(.000)	0.47	1.09

Item 20

```

-----
item:20 (n5q20)
Cases for this item  4448  Discrimination  0.55
Item Threshold(s):   0.00  Weighted MNSQ  0.91
Item Delta(s):      0.00
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.01	-0.63(.528)	-0.51	0.09
9	0.00	64	1.44	-0.06	-3.75(.000)	-0.46	1.00
A	1.00	2228	50.09	0.55	44.35(.000)	0.58	1.00
B	0.00	488	10.97	-0.22	-14.93(.000)	-0.63	0.85
C	0.00	631	14.19	-0.17	-11.16(.000)	-0.40	0.91
D	0.00	1035	23.27	-0.34	-24.19(.000)	-0.60	0.79

Item 21

```

-----
item:21 (n5q21)
Cases for this item  4448  Discrimination  0.44
Item Threshold(s):  -0.35  Weighted MNSQ  1.02
Item Delta(s):      -0.35
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	6	0.13	-0.02	-1.51(.131)	-0.49	0.87
A	0.00	282	6.34	-0.06	-3.68(.000)	-0.21	1.06
B	1.00	2538	57.06	0.44	33.11(.000)	0.40	1.03
C	0.00	309	6.95	-0.12	-8.15(.000)	-0.44	0.95
D	0.00	1313	29.52	-0.38	-27.71(.000)	-0.58	0.88

Item 22

```

-----
item:22 (n5q22)
Cases for this item  4448  Discrimination  0.49
Item Threshold(s):   0.55  Weighted MNSQ  0.97
Item Delta(s):       0.56
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.01	-0.44(.660)	-0.27	0.43
9	0.00	13	0.29	-0.02	-1.22(.221)	-0.21	0.99
A	0.00	146	3.28	-0.10	-6.99(.000)	-0.57	0.94
B	0.00	877	19.72	-0.11	-7.33(.000)	-0.23	0.93
C	1.00	1740	39.12	0.49	37.67(.000)	0.64	1.01
D	0.00	1670	37.54	-0.37	-26.17(.000)	-0.45	0.92

Item 23

```

-----
item:23 (n5q23)
Cases for this item  4448  Discrimination  0.49
Item Threshold(s):   0.44  Weighted MNSQ  0.97
Item Delta(s):       0.44
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	0.01	0.80(.426)	0.38	0.74
9	0.00	17	0.38	-0.06	-3.87(.000)	-1.11	1.03
A	1.00	1841	41.39	0.49	37.53(.000)	0.60	1.03
B	0.00	925	20.80	-0.30	-20.93(.000)	-0.57	0.96
C	0.00	256	5.76	-0.07	-4.39(.000)	-0.24	0.96
D	0.00	1407	31.63	-0.22	-14.91(.000)	-0.30	0.88

Item 24

```

-----
item:24 (n5q24)
Cases for this item  4448  Discrimination  0.35
Item Threshold(s):   0.18  Weighted MNSQ  1.13
Item Delta(s):       0.18
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.07	-0.03	-2.09(.036)	-1.30	0.67
9	0.00	38	0.85	-0.04	-2.81(.005)	-0.58	0.84
A	0.00	1181	26.55	-0.13	-8.90(.000)	-0.20	0.96
B	0.00	694	15.60	-0.22	-15.09(.000)	-0.52	0.87
C	1.00	2068	46.49	0.35	24.65(.000)	0.40	1.11
D	0.00	464	10.43	-0.10	-6.52(.000)	-0.28	0.99

Item 25

```

-----
item:25 (n5q25)
Cases for this item  4446  Discrimination  0.32
Item Threshold(s):  0.27  Weighted MNSQ  1.15
Item Delta(s):      0.27

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.01	0.56(.578)	0.17	0.00
9	0.00	69	1.55	-0.01	-0.88(.380)	-0.11	1.18
A	0.00	535	12.03	-0.15	-10.31(.000)	-0.42	0.99
B	0.00	974	21.91	-0.14	-9.18(.000)	-0.23	0.98
C	1.00	1990	44.76	0.32	22.39(.000)	0.37	1.10
D	0.00	877	19.73	-0.13	-8.55(.000)	-0.23	0.97

Item 26

```

-----
item:26 (n5q26)
Cases for this item  4446  Discrimination  0.63
Item Threshold(s):  0.09  Weighted MNSQ  0.83
Item Delta(s):      0.08

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2200	49.48	-0.60	-50.08(.000)	-0.58	0.87
1	1.00	2154	48.45	0.63	54.23(.000)	0.66	0.90
9	0.00	92	2.07	-0.11	-7.10(.000)	-0.73	0.96

Item 27

```

-----
item:27 (n5q27)
Cases for this item  4445  Discrimination  0.40
Item Threshold(s):  0.38  Weighted MNSQ  1.07
Item Delta(s):      0.38

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	73	1.64	-0.06	-4.06(.000)	-0.54	1.16
A	0.00	966	21.73	-0.29	-20.15(.000)	-0.53	0.92
B	0.00	842	18.94	-0.11	-7.09(.000)	-0.22	0.98
C	0.00	675	15.19	-0.08	-5.62(.000)	-0.21	0.99
D	1.00	1889	42.50	0.40	29.26(.000)	0.50	1.04

Item 28

```

-----
item:28 (n5q28)
Cases for this item  4444  Discrimination  0.39
Item Threshold(s):  0.56  Weighted MNSQ  1.07
Item Delta(s):      0.56

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	22	0.50	-0.04	-3.00(.003)	-0.67	1.31
A	0.00	764	17.19	-0.20	-13.87(.000)	-0.43	0.87
B	0.00	445	10.01	-0.13	-8.70(.000)	-0.36	0.91
C	1.00	1736	39.06	0.39	28.43(.000)	0.52	1.07
D	0.00	1477	33.24	-0.15	-10.39(.000)	-0.21	1.02

Item 29

```

-----
item:29 (n5q29)
Cases for this item  4443  Discrimination  0.36
Item Threshold(s):  0.30  Weighted MNSQ  1.11
Item Delta(s):      0.30

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.39(.163)	-1.28	1.00
9	0.00	38	0.86	-0.07	-4.72(.000)	-0.92	1.19
A	0.00	563	12.67	-0.25	-17.41(.000)	-0.65	0.91
B	0.00	1442	32.46	-0.17	-11.77(.000)	-0.23	0.92
C	1.00	1962	44.16	0.36	26.11(.000)	0.43	1.07
D	0.00	436	9.81	-0.03	-1.96(.050)	-0.10	1.12

Item 30

```

-----
item:30 (n5q30)
Cases for this item  4437  Discrimination  0.33
Item Threshold(s):  0.49  Weighted MNSQ  1.14
Item Delta(s):      0.49

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	76	1.71	-0.02	-1.42(.154)	-0.13	1.19
A	0.00	1098	24.75	-0.11	-7.30(.000)	-0.16	0.94
B	0.00	1314	29.61	-0.21	-14.22(.000)	-0.31	0.89
C	1.00	1791	40.37	0.33	23.15(.000)	0.42	1.15
D	0.00	158	3.56	-0.09	-5.76(.000)	-0.45	1.17

Item 31

```

-----
item:31 (n5q31)
Cases for this item  4432  Discrimination  0.33
Item Threshold(s):  0.63  Weighted MNSQ  1.12
Item Delta(s):      0.64

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	6	0.14	-0.03	-1.90(.058)	-1.00	0.75
9	0.00	33	0.74	-0.05	-3.39(.001)	-0.64	1.29
A	0.00	257	5.80	-0.18	-12.51(.000)	-0.74	0.84
B	0.00	1884	42.51	-0.13	-8.45(.000)	-0.13	0.92
C	1.00	1669	37.66	0.33	23.52(.000)	0.46	1.13
D	0.00	583	13.15	-0.15	-10.07(.000)	-0.36	1.02

Item 32

```

-----
item:32 (n5q32)
Cases for this item  4432  Discrimination  0.34
Item Threshold(s):  1.30  Weighted MNSQ  1.06
Item Delta(s):      1.30

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	0.02	1.46(.144)	1.43	0.34
9	0.00	76	1.71	-0.05	-3.62(.000)	-0.49	1.17
A	0.00	867	19.56	-0.11	-7.50(.000)	-0.20	0.91
B	0.00	1033	23.31	-0.05	-3.56(.000)	-0.09	0.95
C	0.00	779	17.58	-0.15	-10.19(.000)	-0.32	0.95
D	1.00	1158	26.13	0.34	24.13(.000)	0.62	1.18
E	0.00	517	11.67	-0.06	-3.86(.000)	-0.14	0.99

Item 33

```

-----
item:33 (n5q33)
Cases for this item 4431 Discrimination 0.36
Item Threshold(s): 0.87 Weighted MNSQ 1.08
Item Delta(s): 0.86
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.64(.008)	-2.09	1.34
9	0.00	74	1.67	-0.06	-4.15(.000)	-0.51	1.14
A	0.00	363	8.19	-0.22	-14.92(.000)	-0.70	0.87
B	0.00	957	21.60	-0.22	-15.34(.000)	-0.40	0.96
C	0.00	1553	35.05	-0.01	-0.98(.329)	-0.02	0.89
D	1.00	1482	33.45	0.36	25.40(.000)	0.54	1.14

Item 34

```

-----
item:34 (n5q34)
Cases for this item 4431 Discrimination 0.48
Item Threshold(s): 1.37 Weighted MNSQ 0.94
Item Delta(s): 1.37
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2820	63.64	-0.36	-25.35(.000)	-0.25	0.94
1	1.00	1107	24.98	0.48	36.00(.000)	0.88	1.02
9	0.00	504	11.37	-0.11	-7.33(.000)	-0.32	0.97

Item 35

```

-----
item:35 (n5q35)
Cases for this item 4424 Discrimination 0.48
Item Threshold(s): 1.30 Weighted MNSQ 0.95
Item Delta(s): 1.30
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3148	71.16	-0.42	-30.96(.000)	-0.25	0.95
1	1.00	1151	26.02	0.48	36.44(.000)	0.85	0.98
9	0.00	125	2.83	-0.12	-7.94(.000)	-0.71	1.09

Item 36

```

-----
item:36 (n5q36)
Cases for this item 4420 Discrimination 0.43
Item Threshold(s): 2.31 Weighted MNSQ 0.91
Item Delta(s): 2.32
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3566	80.68	-0.34	-24.01(.000)	-0.15	0.96
1	1.00	579	13.10	0.43	31.41(.000)	1.18	1.09
9	0.00	275	6.22	-0.04	-2.76(.006)	-0.17	1.04

Item 37

```

-----
item:37 (n5q37)
Cases for this item  4406  Discrimination  0.44
Item Threshold(s):  2.27  Weighted MNSQ  0.93
Item Delta(s):      2.26
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3774	85.66	-0.42	-30.57(.000)	-0.15	0.98
1	1.00	600	13.62	0.44	32.48(.000)	1.14	0.99
9	0.00	32	0.73	-0.05	-3.21(.001)	-0.52	1.25

Item 38

```

-----
item:38 (n5q38)
Cases for this item  4401  Discrimination  0.34
Item Threshold(s):  2.63  Weighted MNSQ  0.99
Item Delta(s):      2.63
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3814	86.66	-0.30	-21.03(.000)	-0.10	1.01
1	1.00	455	10.34	0.34	24.02(.000)	1.07	1.09
9	0.00	132	3.00	-0.01	-0.36(.717)	-0.01	0.99

Item 39

```

-----
item:39 (n5q39)
Cases for this item  4369  Discrimination  0.33
Item Threshold(s):  3.56  Weighted MNSQ  0.97
Item Delta(s):      3.56
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	4037	92.40	-0.26	-17.65(.000)	-0.06	1.02
1	1.00	209	4.78	0.33	23.25(.000)	1.64	0.96
9	0.00	123	2.82	-0.01	-0.98(.326)	-0.05	1.05

Item 40

```

-----
item:40 (n5q40)
Cases for this item  4321  Discrimination  0.40
Item Threshold(s):  3.21  Weighted MNSQ  0.92
Item Delta(s):      3.21
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3943	91.25	-0.34	-23.89(.000)	-0.09	1.00
1	1.00	279	6.46	0.40	28.49(.000)	1.66	0.92
9	0.00	99	2.29	-0.01	-0.55(.584)	-0.07	1.10

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.36% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4455
Mean	20.31
Standard Deviation	7.43
Variance	55.19
Skewness	0.12
Kurtosis	-0.60
Standard error of mean	0.11
Standard error of measurement	2.59
Coefficient Alpha	0.88

=====

Appendix B.7 Year 5 Reading

=====

NAPLAN 2013, Calibration, Grade 5, Reading
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (r5q01)
Cases for this item 4507 Discrimination 0.39
Item Threshold(s): -2.07 Weighted MNSQ 0.93
Item Delta(s): -2.07

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.11	-0.08	-5.59(.000)	-2.20	0.86
9	0.00	10	0.22	-0.07	-4.45(.000)	-0.61	0.88
A	0.00	157	3.48	-0.17	-11.46(.000)	-0.30	0.96
B	0.00	112	2.49	-0.21	-14.25(.000)	-0.76	1.07
C	0.00	171	3.79	-0.25	-17.30(.000)	-0.74	0.93
D	1.00	4052	89.90	0.39	28.22(.000)	0.71	1.07

=====

Item 2

item:2 (r5q02)
Cases for this item 4507 Discrimination 0.41
Item Threshold(s): -0.95 Weighted MNSQ 1.01
Item Delta(s): -0.94

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.09	-0.06	-4.37(.000)	-2.74	0.56
9	0.00	30	0.67	-0.10	-7.07(.000)	-0.60	1.29
A	1.00	3475	77.10	0.41	30.43(.000)	0.81	1.05
B	0.00	154	3.42	-0.24	-16.85(.000)	-0.77	0.98
C	0.00	228	5.06	-0.19	-13.20(.000)	-0.30	0.98
D	0.00	616	13.67	-0.22	-15.34(.000)	-0.02	1.02

=====

Item 3

item:3 (r5q03)
Cases for this item 4500 Discrimination 0.45
Item Threshold(s): -1.77 Weighted MNSQ 0.89
Item Delta(s): -1.77

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.13(.033)	-2.32	0.00
9	0.00	12	0.27	-0.08	-5.71(.000)	-1.33	1.07
A	0.00	332	7.38	-0.40	-28.96(.000)	-0.88	0.82
B	1.00	3926	87.24	0.45	34.12(.000)	0.75	1.05
C	0.00	229	5.09	-0.19	-13.31(.000)	-0.27	0.92

=====

Item 4

```

-----
item:4 (r5q04)
Cases for this item  4498  Discrimination  0.44
Item Threshold(s):  -0.97  Weighted MNSQ  0.98
Item Delta(s):      -0.97

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.66(.000)	-2.91	0.84
9	0.00	16	0.36	-0.09	-5.97(.000)	-0.98	1.07
A	0.00	455	10.12	-0.30	-21.16(.000)	-0.34	0.90
B	0.00	240	5.34	-0.17	-11.45(.000)	-0.19	0.98
C	1.00	3487	77.52	0.44	32.66(.000)	0.82	1.06
D	0.00	298	6.63	-0.19	-13.13(.000)	-0.18	0.98

Item 5

```

-----
item:5 (r5q05)
Cases for this item  4495  Discrimination  0.28
Item Threshold(s):  -1.93  Weighted MNSQ  1.04
Item Delta(s):      -1.93

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.06	-4.31(.000)	-2.78	1.03
9	0.00	16	0.36	-0.11	-7.54(.000)	-1.55	1.04
A	1.00	3989	88.74	0.28	19.78(.000)	0.68	1.10
B	0.00	91	2.02	-0.17	-11.39(.000)	-0.64	0.94
C	0.00	217	4.83	-0.09	-6.07(.000)	0.16	1.00
D	0.00	180	4.00	-0.20	-13.43(.000)	-0.43	0.88

Item 6

```

-----
item:6 (r5q06)
Cases for this item  4488  Discrimination  0.35
Item Threshold(s):  0.24  Weighted MNSQ  1.14
Item Delta(s):      0.24

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.06	-4.33(.000)	-2.78	1.03
9	0.00	19	0.42	-0.11	-7.43(.000)	-1.36	1.08
A	0.00	1542	34.36	-0.21	-14.63(.000)	0.27	0.99
B	0.00	319	7.11	-0.18	-12.31(.000)	-0.12	1.02
C	1.00	2534	56.46	0.35	25.42(.000)	0.91	1.08
D	0.00	72	1.60	-0.16	-10.56(.000)	-0.76	1.03

Item 7

```

-----
item:7 (r5q07)
Cases for this item  4481  Discrimination  0.43
Item Threshold(s):  -2.22  Weighted MNSQ  0.87
Item Delta(s):      -2.22

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.06	-4.34(.000)	-2.78	1.03
9	0.00	9	0.20	-0.07	-4.96(.000)	-1.51	1.49
A	1.00	4085	91.16	0.43	32.03(.000)	0.72	1.05
B	0.00	127	2.83	-0.25	-17.23(.000)	-0.92	0.78
C	0.00	89	1.99	-0.22	-15.32(.000)	-1.04	0.71
D	0.00	169	3.77	-0.24	-16.40(.000)	-0.61	0.89

Item 8

```

-----
item:8 (r5q08)
Cases for this item  4479  Discrimination  0.46
Item Threshold(s):  0.89  Weighted MNSQ  1.02
Item Delta(s):      0.89

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.06	-4.34(.000)	-2.78	1.03
9	0.00	15	0.33	-0.07	-4.58(.000)	-0.67	1.38
A	0.00	661	14.76	-0.18	-12.22(.000)	0.13	1.02
B	0.00	616	13.75	-0.21	-14.48(.000)	-0.00	0.92
C	0.00	1223	27.31	-0.19	-13.10(.000)	0.24	0.96
D	1.00	1962	43.80	0.46	34.52(.000)	1.15	1.05

Item 9

```

-----
item:9 (r5q09)
Cases for this item  4477  Discrimination  0.47
Item Threshold(s):  -1.79  Weighted MNSQ  0.87
Item Delta(s):      -1.79

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.05	-3.07(.002)	-3.51	0.00
9	0.00	22	0.49	-0.13	-8.51(.000)	-1.53	1.04
A	0.00	247	5.52	-0.29	-20.39(.000)	-0.66	0.78
B	1.00	3920	87.56	0.47	35.37(.000)	0.77	1.04
C	0.00	126	2.81	-0.21	-14.36(.000)	-0.65	0.74
D	0.00	161	3.60	-0.23	-16.06(.000)	-0.63	0.77

Item 10

```

-----
item:10 (r5q10)
Cases for this item  4471  Discrimination  0.52
Item Threshold(s):  -1.53  Weighted MNSQ  0.85
Item Delta(s):      -1.53

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.05	-3.07(.002)	-3.51	0.00
9	0.00	24	0.54	-0.11	-7.44(.000)	-1.12	1.14
A	1.00	3798	84.95	0.52	40.21(.000)	0.81	1.01
B	0.00	212	4.74	-0.32	-22.30(.000)	-0.88	0.72
C	0.00	157	3.51	-0.26	-18.17(.000)	-0.88	0.71
D	0.00	279	6.24	-0.25	-17.12(.000)	-0.38	0.82

Item 11

```

-----
item:11 (r5q11)
Cases for this item  4471  Discrimination  0.37
Item Threshold(s):  -2.06  Weighted MNSQ  0.94
Item Delta(s):      -2.06

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.16(.002)	-2.35	1.63
9	0.00	24	0.54	-0.10	-7.00(.000)	-0.97	1.15
A	0.00	75	1.68	-0.19	-12.77(.000)	-0.89	0.88
B	1.00	4025	90.02	0.37	26.25(.000)	0.72	1.06
C	0.00	94	2.10	-0.24	-16.39(.000)	-1.17	0.64
D	0.00	251	5.61	-0.19	-12.62(.000)	-0.18	0.94

Item 12

```

-----
item:12 (r5ql2)
Cases for this item  4471  Discrimination  0.53
Item Threshold(s):  -0.77  Weighted MNSQ  0.89
Item Delta(s):      -0.77

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.05	-3.07(.002)	-3.51	0.00
9	0.00	20	0.45	-0.11	-7.43(.000)	-1.24	1.16
A	1.00	3343	74.77	0.53	42.32(.000)	0.91	1.02
B	0.00	809	18.09	-0.39	-28.72(.000)	-0.27	0.81
C	0.00	143	3.20	-0.18	-12.18(.000)	-0.44	0.88
D	0.00	155	3.47	-0.22	-15.28(.000)	-0.66	0.83

Item 13

```

-----
item:13 (r5ql3)
Cases for this item  4471  Discrimination  0.42
Item Threshold(s):  -0.45  Weighted MNSQ  1.03
Item Delta(s):      -0.44

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-1.77(.077)	-1.20	3.26
9	0.00	24	0.54	-0.09	-5.91(.000)	-0.73	1.54
A	0.00	676	15.12	-0.29	-19.95(.000)	-0.13	0.92
B	1.00	3102	69.38	0.42	31.33(.000)	0.89	1.04
C	0.00	369	8.25	-0.23	-15.53(.000)	-0.19	0.99
D	0.00	298	6.67	-0.10	-6.44(.000)	0.19	1.03

Item 14

```

-----
item:14 (r5ql4)
Cases for this item  4470  Discrimination  0.32
Item Threshold(s):  1.75   Weighted MNSQ  1.10
Item Delta(s):      1.75

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.06	-3.95(.000)	-3.15	0.50
9	0.00	26	0.58	-0.12	-8.14(.000)	-1.17	0.98
A	0.00	597	13.36	-0.13	-8.62(.000)	0.27	0.99
B	0.00	2386	53.38	-0.08	-5.69(.000)	0.48	0.99
C	1.00	1260	28.19	0.32	22.21(.000)	1.14	1.18
D	0.00	199	4.45	-0.22	-15.16(.000)	-0.43	0.78

Item 15

```

-----
item:15 (r5ql5)
Cases for this item  4469  Discrimination  0.49
Item Threshold(s):  -0.22  Weighted MNSQ  0.98
Item Delta(s):      -0.22

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.04	-2.66(.008)	-2.00	2.13
9	0.00	33	0.74	-0.11	-7.38(.000)	-0.75	1.26
A	0.00	275	6.15	-0.25	-16.99(.000)	-0.40	0.89
B	0.00	217	4.86	-0.24	-16.30(.000)	-0.53	0.97
C	1.00	2924	65.43	0.49	37.09(.000)	0.95	1.04
D	0.00	1018	22.78	-0.26	-18.23(.000)	0.10	0.86

Item 16

```

-----
item:16 (r5ql6)
Cases for this item  4468  Discrimination  0.49
Item Threshold(s):  -0.53  Weighted MNSQ  0.95
Item Delta(s):      -0.53

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.41(.679)	0.18	0.00
9	0.00	26	0.58	-0.13	-8.48(.000)	-1.15	1.32
A	0.00	730	16.34	-0.23	-15.73(.000)	0.06	0.95
B	0.00	277	6.20	-0.28	-19.50(.000)	-0.55	0.84
C	1.00	3167	70.88	0.49	37.74(.000)	0.91	1.02
D	0.00	267	5.98	-0.26	-17.95(.000)	-0.46	0.84

Item 17

```

-----
item:17 (r5ql7)
Cases for this item  4466  Discrimination  0.48
Item Threshold(s):   1.27  Weighted MNSQ  0.97
Item Delta(s):      1.27

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	26	0.58	-0.09	-6.30(.000)	-0.69	1.36
A	0.00	460	10.30	-0.31	-21.72(.000)	-0.33	0.84
B	0.00	628	14.06	-0.26	-17.77(.000)	-0.10	0.89
C	0.00	1718	38.47	-0.08	-5.32(.000)	0.46	0.90
D	1.00	1634	36.59	0.48	36.12(.000)	1.27	1.06

Item 18

```

-----
item:18 (r5ql8)
Cases for this item  4464  Discrimination  0.52
Item Threshold(s):   0.95  Weighted MNSQ  0.95
Item Delta(s):      0.96

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	23	0.52	-0.09	-6.15(.000)	-0.70	1.36
A	0.00	1981	44.38	-0.29	-20.02(.000)	0.25	0.89
B	0.00	268	6.00	-0.18	-12.23(.000)	-0.20	1.06
C	0.00	288	6.45	-0.27	-18.58(.000)	-0.43	0.79
D	1.00	1904	42.65	0.52	40.81(.000)	1.23	1.02

Item 19

```

-----
item:19 (r5ql9)
Cases for this item  4462  Discrimination  0.34
Item Threshold(s):  -0.45  Weighted MNSQ  1.11
Item Delta(s):      -0.44

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	57	1.28	-0.08	-5.11(.000)	-0.18	1.46
A	1.00	3100	69.48	0.34	24.34(.000)	0.83	1.09
B	0.00	615	13.78	-0.18	-12.07(.000)	0.15	1.03
C	0.00	329	7.37	-0.13	-8.77(.000)	0.11	0.96
D	0.00	361	8.09	-0.20	-13.45(.000)	-0.09	0.89

Item 20

```

-----
item:20 (r5q20)
Cases for this item  4456  Discrimination  0.42
Item Threshold(s):  0.73  Weighted MNSQ  1.07
Item Delta(s):      0.72
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	66	1.48	-0.07	-4.38(.000)	0.09	1.34
A	1.00	2105	47.24	0.42	30.82(.000)	1.06	1.05
B	0.00	788	17.68	-0.21	-14.25(.000)	0.12	1.01
C	0.00	711	15.96	-0.19	-13.03(.000)	0.13	0.92
D	0.00	786	17.64	-0.14	-9.11(.000)	0.30	1.05

Item 21

```

-----
item:21 (r5q21)
Cases for this item  4455  Discrimination  0.32
Item Threshold(s):  1.11  Weighted MNSQ  1.17
Item Delta(s):      1.11
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.00	0.28(.778)	0.26	0.00
9	0.00	22	0.49	-0.07	-4.65(.000)	-0.49	1.50
A	0.00	405	9.09	-0.27	-18.49(.000)	-0.28	1.03
B	1.00	1770	39.73	0.32	22.54(.000)	1.01	1.09
C	0.00	642	14.41	-0.10	-6.65(.000)	0.35	1.18
D	0.00	1615	36.25	-0.08	-5.59(.000)	0.47	0.93

Item 22

```

-----
item:22 (r5q22)
Cases for this item  4454  Discrimination  0.47
Item Threshold(s):  0.34  Weighted MNSQ  1.02
Item Delta(s):      0.35
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	125	2.81	-0.06	-4.30(.000)	0.20	1.06
A	0.00	939	21.08	-0.21	-14.54(.000)	0.17	0.92
B	0.00	386	8.67	-0.17	-11.86(.000)	-0.01	1.13
C	0.00	566	12.71	-0.25	-17.58(.000)	-0.09	0.92
D	1.00	2438	54.74	0.47	35.07(.000)	1.03	1.03

Item 23

```

-----
item:23 (r5q23)
Cases for this item  4453  Discrimination  0.41
Item Threshold(s):  -0.55  Weighted MNSQ  1.04
Item Delta(s):      -0.55
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	14	0.31	-0.09	-5.97(.000)	-1.04	1.26
A	1.00	3174	71.28	0.41	29.98(.000)	0.86	1.05
B	0.00	196	4.40	-0.27	-18.81(.000)	-0.66	0.87
C	0.00	834	18.73	-0.17	-11.73(.000)	0.19	0.97
D	0.00	235	5.28	-0.26	-17.67(.000)	-0.47	0.79

Item 24

```

-----
item:24 (r5q24)
Cases for this item  4453  Discrimination  0.50
Item Threshold(s):  -0.16  Weighted MNSQ  0.97
Item Delta(s):      -0.15
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.01	0.70(.482)	0.82	0.00
9	0.00	23	0.52	-0.09	-6.17(.000)	-0.84	1.16
A	0.00	719	16.15	-0.29	-20.00(.000)	-0.07	0.83
B	0.00	665	14.93	-0.23	-16.04(.000)	-0.00	0.91
C	0.00	180	4.04	-0.22	-14.82(.000)	-0.48	1.04
D	1.00	2865	64.34	0.50	38.22(.000)	0.98	1.03

Item 25

```

-----
item:25 (r5q25)
Cases for this item  4452  Discrimination  0.55
Item Threshold(s):  -0.89  Weighted MNSQ  0.86
Item Delta(s):      -0.89
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.70(.484)	-0.09	0.00
9	0.00	23	0.52	-0.09	-6.14(.000)	-0.94	1.16
A	0.00	714	16.04	-0.49	-37.18(.000)	-0.54	0.78
B	0.00	89	2.00	-0.12	-8.02(.000)	-0.30	0.95
C	1.00	3417	76.75	0.55	44.43(.000)	0.91	1.00
D	0.00	208	4.67	-0.15	-10.26(.000)	-0.10	0.74

Item 26

```

-----
item:26 (r5q26)
Cases for this item  4444  Discrimination  0.42
Item Threshold(s):  0.70  Weighted MNSQ  1.07
Item Delta(s):      0.70
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.01	0.42(.674)	0.81	0.00
9	0.00	61	1.37	-0.07	-4.53(.000)	0.03	1.10
A	0.00	373	8.39	-0.19	-12.58(.000)	-0.06	0.95
B	0.00	1140	25.65	-0.30	-20.77(.000)	0.07	0.98
C	1.00	2126	47.84	0.42	30.50(.000)	1.05	1.08
D	0.00	743	16.72	-0.05	-3.34(.001)	0.47	0.92

Item 27

```

-----
item:27 (r5q27)
Cases for this item  4442  Discrimination  0.56
Item Threshold(s):  -0.38  Weighted MNSQ  0.89
Item Delta(s):      -0.38
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	24	0.54	-0.07	-4.52(.000)	-0.42	1.33
A	0.00	129	2.90	-0.12	-7.85(.000)	-0.07	0.93
B	1.00	3046	68.57	0.56	44.97(.000)	0.98	1.01
C	0.00	938	21.12	-0.45	-33.75(.000)	-0.31	0.77
D	0.00	305	6.87	-0.20	-13.62(.000)	-0.12	0.91

Item 28

item:28 (r5q28)Cases for this item 4441 Discrimination 0.49
Item Threshold(s): 1.40 Weighted MNSQ 0.94
Item Delta(s): 1.40

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.00	-0.14(.888)	-0.23	0.00
9	0.00	25	0.56	-0.07	-4.85(.000)	-0.49	1.30
A	0.00	1054	23.73	-0.13	-8.53(.000)	0.34	0.91
B	1.00	1530	34.45	0.49	37.90(.000)	1.32	1.06
C	0.00	1506	33.91	-0.26	-18.06(.000)	0.22	0.94
D	0.00	325	7.32	-0.20	-13.48(.000)	-0.13	0.99

Item 29

item:29 (r5q29)Cases for this item 4438 Discrimination 0.53
Item Threshold(s): 0.89 Weighted MNSQ 0.94
Item Delta(s): 0.89

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	58	1.31	-0.09	-5.69(.000)	-0.23	1.13
A	0.00	578	13.02	-0.23	-15.55(.000)	-0.01	0.86
B	0.00	1457	32.83	-0.20	-13.83(.000)	0.26	0.91
C	0.00	388	8.74	-0.29	-20.06(.000)	-0.33	0.89
D	1.00	1957	44.10	0.53	41.62(.000)	1.24	1.01

Item 30

item:30 (r5q30)Cases for this item 4435 Discrimination 0.35
Item Threshold(s): 1.84 Weighted MNSQ 1.08
Item Delta(s): 1.84

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.98(.326)	-0.07	0.00
9	0.00	55	1.24	-0.05	-3.64(.000)	0.03	1.25
A	0.00	656	14.79	-0.33	-23.21(.000)	-0.21	0.87
B	0.00	1462	32.97	0.07	4.50(.000)	0.70	1.06
C	1.00	1192	26.88	0.35	25.21(.000)	1.21	1.09
D	0.00	1069	24.10	-0.15	-10.33(.000)	0.31	0.92

Item 31

item:31 (r5q31)Cases for this item 4431 Discrimination 0.51
Item Threshold(s): 0.70 Weighted MNSQ 0.96
Item Delta(s): 0.71

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	36	0.81	-0.09	-5.98(.000)	-0.44	1.21
A	0.00	842	19.00	-0.24	-16.31(.000)	0.08	0.86
B	0.00	821	18.53	-0.23	-15.49(.000)	0.09	0.92
C	0.00	618	13.95	-0.19	-12.86(.000)	0.09	0.96
D	1.00	2114	47.71	0.51	39.56(.000)	1.17	1.04

Item 32

```

-----
item:32 (r5q32)
Cases for this item  4430  Discrimination  0.52
Item Threshold(s):  1.15  Weighted MNSQ  0.93
Item Delta(s):      1.15
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	37	0.84	-0.05	-3.64(.000)	-0.11	1.32
A	0.00	1654	37.34	-0.33	-22.91(.000)	0.15	0.90
B	0.00	755	17.04	-0.14	-9.40(.000)	0.26	0.93
C	1.00	1730	39.05	0.52	40.14(.000)	1.30	1.05
D	0.00	254	5.73	-0.16	-10.72(.000)	-0.12	0.87

Item 33

```

-----
item:33 (r5q33)
Cases for this item  4412  Discrimination  0.26
Item Threshold(s):  1.11  Weighted MNSQ  1.23
Item Delta(s):      1.11
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	23	0.52	-0.08	-5.48(.000)	-0.62	1.30
A	1.00	1759	39.87	0.26	17.56(.000)	0.94	1.13
B	0.00	721	16.34	-0.09	-5.71(.000)	0.39	1.19
C	0.00	434	9.84	-0.23	-15.67(.000)	-0.13	0.95
D	0.00	1475	33.43	-0.04	-2.69(.007)	0.53	0.95

Item 34

```

-----
item:34 (r5q34)
Cases for this item  4407  Discrimination  0.50
Item Threshold(s):  1.77  Weighted MNSQ  0.93
Item Delta(s):      1.78
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2923	66.33	-0.34	-24.17(.000)	0.34	0.99
1	1.00	1233	27.98	0.50	38.60(.000)	1.46	0.92
9	0.00	251	5.70	-0.28	-19.06(.000)	-0.54	0.91

Item 35

```

-----
item:35 (r5q35)
Cases for this item  4399  Discrimination  0.39
Item Threshold(s):  1.52  Weighted MNSQ  1.04
Item Delta(s):      1.53
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	36	0.82	-0.07	-4.74(.000)	-0.36	1.28
A	1.00	1418	32.23	0.39	28.40(.000)	1.23	1.11
B	0.00	806	18.32	-0.19	-12.59(.000)	0.20	1.04
C	0.00	1731	39.35	-0.10	-6.38(.000)	0.46	0.94
D	0.00	408	9.27	-0.20	-13.69(.000)	-0.06	0.92

Item 36

```

-----
item:36 (r5q36)
Cases for this item  4385  Discrimination  0.55
Item Threshold(s):  -0.28  Weighted MNSQ  0.91
Item Delta(s):      -0.28
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.84(.066)	-2.06	0.00
9	0.00	23	0.52	-0.07	-4.97(.000)	-0.38	0.74
A	0.00	411	9.37	-0.30	-20.57(.000)	-0.31	0.84
B	1.00	2936	66.96	0.55	44.10(.000)	1.00	1.02
C	0.00	443	10.10	-0.26	-18.06(.000)	-0.18	0.83
D	0.00	571	13.02	-0.26	-18.19(.000)	-0.12	0.78

Item 37

```

-----
item:37 (r5q37)
Cases for this item  4369  Discrimination  0.34
Item Threshold(s):   1.56  Weighted MNSQ  1.07
Item Delta(s):      1.56
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	4	0.09	-0.01	-0.73(.468)	0.18	0.60
A	0.00	369	8.45	-0.12	-8.30(.000)	0.18	1.10
B	1.00	1386	31.72	0.34	23.99(.000)	1.16	1.23
C	0.00	1339	30.65	0.01	0.94(.345)	0.62	0.97
D	0.00	1271	29.09	-0.29	-19.81(.000)	0.13	0.82

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 1.13% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

```

-----
N                      4507
Mean                   21.84
Standard Deviation     7.25
Variance               52.59
Skewness               -0.17
Kurtosis               -0.62
Standard error of mean 0.11
Standard error of measurement 2.56
Coefficient Alpha      0.88
-----

```

Appendix B.8 Year 5 Spelling

=====

NAPLAN 2013, Calibration, Grade 5, Spelling
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (lc5q01)
Cases for this item 4507 Discrimination 0.39
Item Threshold(s): -4.37 Weighted MNSQ 0.90
Item Delta(s): -4.37

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	277	6.15	-0.38	-27.96(.000)	-3.66	1.88
1	1.00	4221	93.65	0.39	28.50(.000)	0.26	2.01
9	0.00	9	0.20	-0.07	-4.41(.000)	-3.76	2.42

=====

Item 2

item:2 (lc5q02)
Cases for this item 4507 Discrimination 0.61
Item Threshold(s): -2.12 Weighted MNSQ 0.93
Item Delta(s): -2.12

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	931	20.66	-0.58	-47.65(.000)	-2.44	1.77
1	1.00	3521	78.12	0.61	51.10(.000)	0.71	1.80
9	0.00	55	1.22	-0.15	-9.92(.000)	-2.99	1.58

=====

Item 3

item:3 (lc5q03)
Cases for this item 4498 Discrimination 0.55
Item Threshold(s): -1.64 Weighted MNSQ 1.15
Item Delta(s): -1.64

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1169	25.99	-0.53	-41.62(.000)	-1.89	1.94
1	1.00	3283	72.99	0.55	44.00(.000)	0.75	1.84
9	0.00	46	1.02	-0.12	-8.26(.000)	-3.23	1.97

=====

Item 4

item:4 (lc5q04)
Cases for this item 4486 Discrimination 0.58
Item Threshold(s): -1.90 Weighted MNSQ 1.05
Item Delta(s): -1.90

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1039	23.16	-0.56	-45.14(.000)	-2.15	1.84
1	1.00	3409	75.99	0.58	47.36(.000)	0.73	1.81
9	0.00	38	0.85	-0.12	-7.97(.000)	-3.17	1.76

=====

Item 5

```

-----
item:5 (lc5q05)
Cases for this item  4479  Discrimination  0.61
Item Threshold(s):  -1.21  Weighted MNSQ  1.06
Item Delta(s):      -1.21

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1412	31.52	-0.59	-49.06(.000)	-1.79	1.86
1	1.00	3040	67.87	0.61	50.91(.000)	0.91	1.76
9	0.00	27	0.60	-0.10	-6.98(.000)	-3.01	1.85

Item 6

```

-----
item:6 (lc5q06)
Cases for this item  4473  Discrimination  0.66
Item Threshold(s):  -0.58  Weighted MNSQ  0.99
Item Delta(s):      -0.58

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1777	39.73	-0.64	-55.41(.000)	-1.56	1.79
1	1.00	2657	59.40	0.66	58.71(.000)	1.16	1.68
9	0.00	39	0.87	-0.13	-8.55(.000)	-3.29	1.64

Item 7

```

-----
item:7 (lc5q07)
Cases for this item  4466  Discrimination  0.59
Item Threshold(s):  -0.73  Weighted MNSQ  1.14
Item Delta(s):      -0.73

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1663	37.24	-0.57	-46.25(.000)	-1.49	1.84
1	1.00	2750	61.58	0.59	49.33(.000)	1.03	1.79
9	0.00	53	1.19	-0.13	-8.58(.000)	-2.48	1.85

Item 8

```

-----
item:8 (lc5q08)
Cases for this item  4463  Discrimination  0.65
Item Threshold(s):  -0.58  Weighted MNSQ  1.01
Item Delta(s):      -0.58

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1762	39.48	-0.63	-53.78(.000)	-1.54	1.80
1	1.00	2654	59.47	0.65	57.23(.000)	1.16	1.68
9	0.00	47	1.05	-0.13	-8.50(.000)	-2.76	1.65

Item 9

```

-----
item:9 (lc5q09)
Cases for this item  4462  Discrimination  0.60
Item Threshold(s):   0.46  Weighted MNSQ  1.13
Item Delta(s):      0.46

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2378	53.29	-0.56	-44.67(.000)	-1.02	1.85
1	1.00	1979	44.35	0.60	50.46(.000)	1.46	1.71
9	0.00	105	2.35	-0.15	-9.85(.000)	-2.00	1.85

Item 10

```

-----
item:10 (lc5q10)
Cases for this item  4457  Discrimination  0.65
Item Threshold(s):  0.43  Weighted MNSQ  1.03
Item Delta(s):      0.43

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2416	54.21	-0.63	-53.87(.000)	-1.11	1.81
1	1.00	2001	44.90	0.65	56.75(.000)	1.52	1.65
9	0.00	40	0.90	-0.10	-6.58(.000)	-2.59	2.24

Item 11

```

-----
item:11 (lc5q11)
Cases for this item  4443  Discrimination  0.62
Item Threshold(s):  1.45  Weighted MNSQ  0.96
Item Delta(s):      1.45

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2978	67.03	-0.56	-45.36(.000)	-0.74	1.80
1	1.00	1368	30.79	0.62	52.93(.000)	2.00	1.61
9	0.00	97	2.18	-0.15	-10.43(.000)	-2.33	1.80

Item 12

```

-----
item:12 (lc5q12)
Cases for this item  4436  Discrimination  0.50
Item Threshold(s):  2.91  Weighted MNSQ  0.99
Item Delta(s):      2.91

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3541	79.82	-0.34	-24.21(.000)	-0.30	1.92
1	1.00	677	15.26	0.50	37.99(.000)	2.60	1.59
9	0.00	218	4.91	-0.19	-12.89(.000)	-1.74	1.80

Item 13

```

-----
item:13 (lc5q13)
Cases for this item  4432  Discrimination  0.60
Item Threshold(s):  -2.08  Weighted MNSQ  0.93
Item Delta(s):      -2.08

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	898	20.26	-0.58	-47.30(.000)	-2.32	1.73
1	1.00	3484	78.61	0.60	50.00(.000)	0.73	1.79
9	0.00	50	1.13	-0.13	-8.56(.000)	-2.73	1.71

Item 14

```

-----
item:14 (lc5q14)
Cases for this item  4422  Discrimination  0.69
Item Threshold(s):  -0.96  Weighted MNSQ  0.88
Item Delta(s):      -0.96

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1478	33.42	-0.66	-58.28(.000)	-1.78	1.67
1	1.00	2885	65.24	0.69	62.99(.000)	1.10	1.67
9	0.00	59	1.33	-0.14	-9.69(.000)	-2.76	1.66

Item 15

```

-----
item:15 (lc5q15)
Cases for this item  4411  Discrimination  0.64
Item Threshold(s):  -0.44  Weighted MNSQ  1.02
Item Delta(s):      -0.44

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1739	39.42	-0.60	-50.07(.000)	-1.41	1.77
1	1.00	2560	58.04	0.64	55.92(.000)	1.20	1.70
9	0.00	112	2.54	-0.15	-10.10(.000)	-1.98	1.82

Item 16

```

-----
item:16 (lc5q16)
Cases for this item  4395  Discrimination  0.65
Item Threshold(s):  -0.39  Weighted MNSQ  1.01
Item Delta(s):      -0.39

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1694	38.54	-0.59	-48.78(.000)	-1.40	1.73
1	1.00	2530	57.57	0.65	56.80(.000)	1.23	1.71
9	0.00	171	3.89	-0.17	-11.52(.000)	-1.72	1.72

Item 17

```

-----
item:17 (lc5q17)
Cases for this item  4380  Discrimination  0.69
Item Threshold(s):  -0.20  Weighted MNSQ  0.92
Item Delta(s):      -0.20

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1836	41.92	-0.65	-55.97(.000)	-1.39	1.67
1	1.00	2405	54.91	0.69	62.90(.000)	1.35	1.64
9	0.00	139	3.17	-0.14	-9.21(.000)	-1.65	2.01

Item 18

```

-----
item:18 (lc5q18)
Cases for this item  4372  Discrimination  0.66
Item Threshold(s):  0.41  Weighted MNSQ  0.99
Item Delta(s):      0.40

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2258	51.65	-0.61	-51.04(.000)	-1.06	1.76
1	1.00	2012	46.02	0.66	58.30(.000)	1.56	1.60
9	0.00	102	2.33	-0.16	-10.76(.000)	-2.17	1.88

Item 19

```

-----
item:19 (lc5q19)
Cases for this item  4360  Discrimination  0.69
Item Threshold(s):  0.41  Weighted MNSQ  0.92
Item Delta(s):      0.40

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2234	51.24	-0.64	-54.58(.000)	-1.10	1.71
1	1.00	2010	46.10	0.69	62.68(.000)	1.60	1.59
9	0.00	116	2.66	-0.15	-10.28(.000)	-2.05	1.89

Item 20

```

-----
item:20 (lc5q20)
Cases for this item  4325  Discrimination  0.64
Item Threshold(s):  0.38  Weighted MNSQ  1.03
Item Delta(s):      0.38

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2166	50.08	-0.59	-48.34(.000)	-1.04	1.76
1	1.00	2019	46.68	0.64	54.43(.000)	1.52	1.64
9	0.00	140	3.24	-0.12	-8.23(.000)	-1.37	1.89

Item 21

```

-----
item:21 (lc5q21)
Cases for this item  4292  Discrimination  0.60
Item Threshold(s):  1.72  Weighted MNSQ  0.98
Item Delta(s):      1.72

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2859	66.61	-0.52	-40.17(.000)	-0.60	1.80
1	1.00	1215	28.31	0.60	48.65(.000)	2.12	1.60
9	0.00	218	5.08	-0.10	-6.61(.000)	-0.73	1.74

Item 22

```

-----
item:22 (lc5q22)
Cases for this item  4258  Discrimination  0.60
Item Threshold(s):  1.78  Weighted MNSQ  0.97
Item Delta(s):      1.79

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2919	68.55	-0.53	-40.71(.000)	-0.56	1.81
1	1.00	1177	27.64	0.60	48.78(.000)	2.15	1.58
9	0.00	162	3.80	-0.11	-7.54(.000)	-0.92	1.64

Item 23

```

-----
item:23 (lc5q23)
Cases for this item  4223  Discrimination  0.64
Item Threshold(s):  1.49  Weighted MNSQ  0.91
Item Delta(s):      1.49

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2734	64.74	-0.58	-46.65(.000)	-0.68	1.75
1	1.00	1334	31.59	0.64	54.45(.000)	2.11	1.54
9	0.00	155	3.67	-0.11	-6.93(.000)	-0.94	1.68

Item 24

```

-----
item:24 (lc5q24)
Cases for this item  4180  Discrimination  0.54
Item Threshold(s):  2.24  Weighted MNSQ  1.02
Item Delta(s):      2.24

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3115	74.52	-0.49	-36.23(.000)	-0.38	1.86
1	1.00	947	22.66	0.54	41.85(.000)	2.29	1.62
9	0.00	118	2.82	-0.09	-5.66(.000)	-0.80	1.64

Item 25

```

-----
item:25 (lc5q25)
Cases for this item   4123   Discrimination   0.44
Item Threshold(s):    3.51   Weighted MNSQ   1.02
Item Delta(s):        3.51
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3483	84.48	-0.36	-24.68(.000)	-0.11	1.95
1	1.00	474	11.50	0.44	31.28(.000)	2.86	1.54
9	0.00	166	4.03	-0.05	-3.20(.001)	-0.16	1.77

```

-----
The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 2.51% of the data are missing.
-----

```

The following results are scaled to assume that a single response was provided for each item.

```

N                4507
Mean             12.67
Standard Deviation 6.88
Variance         47.31
Skewness         -0.07
Kurtosis         -1.00
Standard error of mean 0.10
Standard error of measurement 1.91
Coefficient Alpha 0.92
-----

```

Appendix B.9 Year 7 G&P

=====
 NAPLAN 2013, Calibration, Grade 7, GP
 GENERALISED ITEM ANALYSIS
 =====

Item 1

 item:1 (lc7q31)
 Cases for this item 4833 Discrimination 0.32
 Item Threshold(s): -2.27 Weighted MNSQ 0.96
 Item Delta(s): -2.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	11	0.23	-0.07	-4.92(.000)	-0.89	0.88
A	1.00	4454	92.16	0.32	23.40(.000)	0.63	0.89
B	0.00	118	2.44	-0.11	-7.97(.000)	-0.16	1.02
C	0.00	199	4.12	-0.25	-17.91(.000)	-0.39	1.00
D	0.00	51	1.06	-0.15	-10.51(.000)	-0.72	0.92

Item 2

 item:2 (lc7q32)
 Cases for this item 4833 Discrimination 0.43
 Item Threshold(s): -2.31 Weighted MNSQ 0.89
 Item Delta(s): -2.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.17(.030)	-1.03	0.00
9	0.00	15	0.31	-0.09	-6.37(.000)	-0.62	1.01
A	1.00	4470	92.49	0.43	33.26(.000)	0.65	0.87
B	0.00	230	4.76	-0.34	-25.44(.000)	-0.75	0.73
C	0.00	61	1.26	-0.21	-14.66(.000)	-1.02	0.85
D	0.00	56	1.16	-0.11	-7.86(.000)	-0.22	0.99

Item 3

 item:3 (lc7q33)
 Cases for this item 4830 Discrimination 0.46
 Item Threshold(s): -1.84 Weighted MNSQ 0.89
 Item Delta(s): -1.83

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	17	0.35	-0.08	-5.81(.000)	-0.68	0.80
A	0.00	81	1.68	-0.20	-14.03(.000)	-0.67	1.02
B	1.00	4289	88.80	0.46	36.05(.000)	0.69	0.86
C	0.00	354	7.33	-0.34	-24.89(.000)	-0.46	0.80
D	0.00	89	1.84	-0.20	-14.22(.000)	-0.74	0.87

Item 4

```

-----
item:4 (lc7q34)
Cases for this item  4828  Discrimination  0.32
Item Threshold(s):  -2.27  Weighted MNSQ  0.96
Item Delta(s):      -2.26
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.94(.347)	-0.06	0.00
9	0.00	16	0.33	-0.07	-5.03(.000)	-0.55	0.85
A	0.00	246	5.10	-0.19	-13.77(.000)	-0.14	1.02
B	0.00	52	1.08	-0.20	-14.21(.000)	-1.00	0.87
C	0.00	63	1.30	-0.16	-11.12(.000)	-0.64	0.91
D	1.00	4450	92.17	0.32	23.39(.000)	0.63	0.89

Item 5

```

-----
item:5 (lc7q35)
Cases for this item  4824  Discrimination  0.42
Item Threshold(s):  -1.55  Weighted MNSQ  0.93
Item Delta(s):      -1.54
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.01	-1.04(.300)	0.05	0.45
9	0.00	21	0.44	-0.07	-4.52(.000)	-0.19	0.86
A	1.00	4147	85.97	0.42	32.23(.000)	0.70	0.85
B	0.00	229	4.75	-0.17	-12.09(.000)	-0.12	0.96
C	0.00	220	4.56	-0.22	-16.01(.000)	-0.32	0.96
D	0.00	204	4.23	-0.29	-20.98(.000)	-0.61	0.84

Item 6

```

-----
item:6 (lc7q36)
Cases for this item  4822  Discrimination  0.38
Item Threshold(s):  -1.07  Weighted MNSQ  1.00
Item Delta(s):      -1.07
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.10	-0.08	-5.64(.000)	-1.92	1.00
9	0.00	16	0.33	-0.09	-6.21(.000)	-0.83	0.97
A	1.00	3862	80.09	0.38	28.69(.000)	0.71	0.88
B	0.00	812	16.84	-0.31	-22.63(.000)	-0.02	0.83
C	0.00	67	1.39	-0.15	-10.48(.000)	-0.56	0.93
D	0.00	60	1.24	-0.10	-7.14(.000)	-0.20	1.16

Item 7

```

-----
item:7 (lc7q37)
Cases for this item  4818  Discrimination  0.44
Item Threshold(s):  -1.13  Weighted MNSQ  0.94
Item Delta(s):      -1.12
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.95(.343)	-0.06	0.00
9	0.00	15	0.31	-0.07	-4.71(.000)	-0.53	0.86
A	0.00	657	13.64	-0.34	-25.02(.000)	-0.18	0.91
B	0.00	224	4.65	-0.20	-14.00(.000)	-0.16	0.84
C	0.00	24	0.50	-0.14	-9.56(.000)	-1.05	0.79
D	1.00	3897	80.88	0.44	33.66(.000)	0.73	0.85

Item 8

```

-----
item:8 (lc7q38)
Cases for this item  4818  Discrimination  0.47
Item Threshold(s):  -0.98  Weighted MNSQ  0.92
Item Delta(s):      -0.98
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	20	0.42	-0.08	-5.79(.000)	-0.59	1.01
A	0.00	442	9.17	-0.23	-16.31(.000)	-0.06	0.82
B	0.00	264	5.48	-0.31	-22.66(.000)	-0.52	0.77
C	1.00	3799	78.85	0.47	37.44(.000)	0.76	0.85
D	0.00	293	6.08	-0.22	-15.43(.000)	-0.17	0.84

Item 9

```

-----
item:9 (lc7q39)
Cases for this item  4815  Discrimination  0.41
Item Threshold(s):  0.09  Weighted MNSQ  1.02
Item Delta(s):      0.09
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.03	-2.01(.045)	-0.74	1.15
9	0.00	44	0.91	-0.09	-6.19(.000)	-0.33	0.95
A	0.00	557	11.57	-0.11	-8.03(.000)	0.30	0.88
B	1.00	2881	59.83	0.41	31.42(.000)	0.84	0.86
C	0.00	768	15.95	-0.26	-18.94(.000)	0.03	0.89
D	0.00	562	11.67	-0.19	-13.16(.000)	0.12	0.79

Item 10

```

-----
item:10 (lc7q40)
Cases for this item  4813  Discrimination  0.46
Item Threshold(s):  -0.22  Weighted MNSQ  0.97
Item Delta(s):      -0.22
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	27	0.56	-0.11	-7.76(.000)	-0.69	0.89
A	0.00	210	4.36	-0.25	-18.27(.000)	-0.45	0.85
B	0.00	1185	24.62	-0.28	-19.99(.000)	0.16	0.80
C	1.00	3176	65.99	0.46	35.89(.000)	0.83	0.85
D	0.00	215	4.47	-0.18	-13.00(.000)	-0.18	0.87

Item 11

```

-----
item:11 (lc7q41)
Cases for this item  4813  Discrimination  0.53
Item Threshold(s):  -0.48  Weighted MNSQ  0.90
Item Delta(s):      -0.49
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	40	0.83	-0.12	-8.44(.000)	-0.75	1.01
A	1.00	3414	70.93	0.53	43.71(.000)	0.84	0.82
B	0.00	355	7.38	-0.28	-20.08(.000)	-0.29	0.87
C	0.00	785	16.31	-0.34	-25.30(.000)	-0.07	0.80
D	0.00	219	4.55	-0.15	-10.72(.000)	-0.02	0.80

Item 12

```

-----
item:12 (lc7q42)
Cases for this item 4808 Discrimination 0.48
Item Threshold(s): -0.31 Weighted MNSQ 0.96
Item Delta(s): -0.31
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-2.00(.046)	-0.58	0.00
9	0.00	36	0.75	-0.12	-8.17(.000)	-0.76	1.05
A	0.00	418	8.69	-0.25	-18.25(.000)	-0.11	0.81
B	0.00	539	11.21	-0.30	-21.61(.000)	-0.12	0.83
C	1.00	3255	67.70	0.48	37.43(.000)	0.83	0.84
D	0.00	559	11.63	-0.14	-10.07(.000)	0.22	0.84

Item 13

```

-----
item:13 (lc7q43)
Cases for this item 4805 Discrimination 0.46
Item Threshold(s): -0.28 Weighted MNSQ 0.97
Item Delta(s): -0.28
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.02	-1.50(.134)	-0.32	0.37
9	0.00	31	0.65	-0.09	-6.04(.000)	-0.52	1.14
A	0.00	1193	24.83	-0.29	-21.34(.000)	0.15	0.79
B	0.00	92	1.91	-0.19	-13.37(.000)	-0.54	0.93
C	1.00	3227	67.16	0.46	36.18(.000)	0.82	0.86
D	0.00	260	5.41	-0.25	-18.01(.000)	-0.31	0.82

Item 14

```

-----
item:14 (lc7q44)
Cases for this item 4803 Discrimination 0.51
Item Threshold(s): -0.68 Weighted MNSQ 0.92
Item Delta(s): -0.68
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	6	0.12	-0.07	-4.81(.000)	-0.82	0.74
9	0.00	17	0.35	-0.08	-5.76(.000)	-0.80	1.03
A	0.00	459	9.56	-0.34	-24.93(.000)	-0.27	0.82
B	0.00	566	11.78	-0.26	-18.81(.000)	-0.03	0.76
C	1.00	3569	74.31	0.51	41.00(.000)	0.80	0.85
D	0.00	186	3.87	-0.16	-11.32(.000)	-0.08	0.80

Item 15

```

-----
item:15 (lc7q45)
Cases for this item 4800 Discrimination 0.41
Item Threshold(s): 0.71 Weighted MNSQ 1.02
Item Delta(s): 0.71
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.01	-0.91(.363)	0.24	0.42
9	0.00	43	0.90	-0.07	-4.60(.000)	-0.22	1.08
A	0.00	974	20.29	-0.11	-7.33(.000)	0.39	0.86
B	0.00	980	20.42	-0.20	-13.96(.000)	0.24	0.84
C	1.00	2251	46.90	0.41	30.80(.000)	0.92	0.86
D	0.00	550	11.46	-0.23	-16.61(.000)	0.02	0.88

Item 16

```

-----
item:16 (lc7q46)
Cases for this item  4793  Discrimination  0.30
Item Threshold(s):  0.65  Weighted MNSQ  1.12
Item Delta(s):      0.65
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	45	0.94	-0.11	-7.48(.000)	-0.41	1.16
A	1.00	2312	48.24	0.30	21.48(.000)	0.82	0.89
B	0.00	1211	25.27	-0.08	-5.59(.000)	0.43	0.90
C	0.00	954	19.90	-0.14	-10.03(.000)	0.34	0.83
D	0.00	271	5.65	-0.20	-13.92(.000)	-0.11	0.92

Item 17

```

-----
item:17 (lc7q47)
Cases for this item  4791  Discrimination  0.52
Item Threshold(s):  0.57  Weighted MNSQ  0.93
Item Delta(s):      0.57
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.01	-0.91(.362)	0.03	0.17
9	0.00	76	1.59	-0.09	-5.95(.000)	-0.09	1.08
A	0.00	780	16.28	-0.18	-12.97(.000)	0.23	0.81
B	0.00	1032	21.54	-0.25	-18.15(.000)	0.16	0.78
C	0.00	505	10.54	-0.24	-17.38(.000)	-0.04	0.80
D	1.00	2396	50.01	0.52	41.71(.000)	0.99	0.84

Item 18

```

-----
item:18 (lc7q48)
Cases for this item  4788  Discrimination  0.46
Item Threshold(s):  0.13  Weighted MNSQ  0.99
Item Delta(s):      0.13
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	22	0.46	-0.08	-5.37(.000)	-0.62	0.92
A	0.00	1190	24.85	-0.22	-15.23(.000)	0.26	0.80
B	0.00	480	10.03	-0.28	-20.25(.000)	-0.14	0.86
C	1.00	2833	59.17	0.46	35.77(.000)	0.88	0.86
D	0.00	263	5.49	-0.19	-13.37(.000)	-0.08	0.75

Item 19

```

-----
item:19 (lc7q49)
Cases for this item  4785  Discrimination  0.38
Item Threshold(s):  0.80  Weighted MNSQ  1.04
Item Delta(s):      0.80
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.79(.073)	-1.10	0.00
9	0.00	149	3.11	-0.02	-1.14(.253)	0.40	0.80
A	0.00	773	16.15	-0.20	-14.35(.000)	0.19	0.89
B	0.00	711	14.86	-0.17	-11.68(.000)	0.25	0.89
C	0.00	994	20.77	-0.12	-8.53(.000)	0.37	0.81
D	1.00	2157	45.08	0.38	28.04(.000)	0.90	0.90

Item 20

```

-----
item:20 (lc7q50)
Cases for this item  4782  Discrimination  0.42
Item Threshold(s):  0.35  Weighted MNSQ  1.02
Item Delta(s):      0.35

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-2.09(.036)	-0.36	0.89
9	0.00	45	0.94	-0.04	-2.92(.004)	0.13	1.11
A	1.00	2613	54.64	0.42	31.93(.000)	0.87	0.84
B	0.00	901	18.84	-0.06	-3.96(.000)	0.48	0.91
C	0.00	916	19.16	-0.34	-25.19(.000)	-0.02	0.78
D	0.00	305	6.38	-0.19	-13.54(.000)	-0.01	0.88

Item 21

```

-----
item:21 (lc7q51)
Cases for this item  4776  Discrimination  0.43
Item Threshold(s):  0.91  Weighted MNSQ  1.00
Item Delta(s):      0.91

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-1.80(.072)	-0.53	0.80
9	0.00	19	0.40	-0.04	-3.01(.003)	-0.03	1.04
A	0.00	1277	26.74	-0.23	-16.10(.000)	0.25	0.84
B	0.00	824	17.25	-0.10	-6.67(.000)	0.38	0.90
C	0.00	603	12.63	-0.22	-15.60(.000)	0.09	0.76
D	1.00	2051	42.94	0.43	32.97(.000)	0.98	0.86

Item 22

```

-----
item:22 (lc7q52)
Cases for this item  4771  Discrimination  0.34
Item Threshold(s):  1.06  Weighted MNSQ  1.07
Item Delta(s):      1.06

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.00	0.08(.933)	1.05	0.00
9	0.00	57	1.19	-0.04	-2.54(.011)	0.18	1.06
A	0.00	1543	32.34	-0.19	-13.30(.000)	0.34	0.85
B	0.00	756	15.85	-0.18	-12.33(.000)	0.24	0.90
C	0.00	519	10.88	-0.03	-2.21(.027)	0.50	0.98
D	1.00	1895	39.72	0.34	25.01(.000)	0.90	0.87

Item 23

```

-----
item:23 (lc7q53)
Cases for this item  4762  Discrimination  0.43
Item Threshold(s):  1.24  Weighted MNSQ  0.98
Item Delta(s):      1.24

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	0.01	1.00(.316)	0.95	0.59
9	0.00	29	0.61	-0.05	-3.25(.001)	-0.08	0.95
A	0.00	875	18.37	-0.17	-12.19(.000)	0.24	0.85
B	1.00	1722	36.16	0.43	33.04(.000)	1.06	0.91
C	0.00	1003	21.06	-0.19	-13.44(.000)	0.28	0.83
D	0.00	1131	23.75	-0.14	-9.63(.000)	0.35	0.76

Item 24

```

-----
item:24 (lc7q54)
Cases for this item  4760  Discrimination  0.31
Item Threshold(s):  1.56  Weighted MNSQ  1.07
Item Delta(s):      1.56
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.01	0.92(.359)	0.91	0.00
9	0.00	43	0.90	-0.05	-3.67(.000)	0.02	0.94
A	0.00	1031	21.66	-0.21	-14.95(.000)	0.24	0.83
B	0.00	1183	24.85	-0.14	-9.93(.000)	0.37	0.85
C	0.00	1065	22.37	0.03	2.26(.024)	0.62	0.95
D	1.00	1437	30.19	0.31	22.09(.000)	0.95	0.89

Item 25

```

-----
item:25 (lc7q55)
Cases for this item  4751  Discrimination  0.33
Item Threshold(s):  1.47  Weighted MNSQ  1.05
Item Delta(s):      1.47
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	53	1.12	-0.03	-2.40(.017)	0.30	0.93
A	0.00	933	19.64	-0.16	-11.50(.000)	0.28	0.89
B	1.00	1517	31.93	0.33	24.11(.000)	0.98	0.95
C	0.00	1003	21.11	-0.04	-2.50(.012)	0.50	0.85
D	0.00	1245	26.21	-0.16	-11.13(.000)	0.35	0.80

Item 26

```

-----
item:26 (lc7q56)
Cases for this item  4746  Discrimination  0.36
Item Threshold(s):  1.59  Weighted MNSQ  1.02
Item Delta(s):      1.59
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-2.25(.025)	-0.99	1.52
9	0.00	65	1.37	-0.07	-4.80(.000)	0.01	1.00
A	0.00	1025	21.60	-0.10	-7.11(.000)	0.40	0.81
B	0.00	1177	24.80	-0.17	-11.55(.000)	0.33	0.88
C	0.00	1071	22.57	-0.10	-7.17(.000)	0.42	0.88
D	1.00	1406	29.62	0.36	26.84(.000)	1.03	0.90

Item 27

```

-----
item:27 (lc7q57)
Cases for this item  4723  Discrimination  0.25
Item Threshold(s):  2.03  Weighted MNSQ  1.06
Item Delta(s):      2.03
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.00	0.29(.774)	1.33	0.00
9	0.00	20	0.42	-0.04	-2.64(.008)	0.01	1.18
A	1.00	1058	22.40	0.25	17.56(.000)	0.99	1.03
B	0.00	2404	50.90	-0.02	-1.41(.158)	0.55	0.81
C	0.00	901	19.08	-0.14	-9.45(.000)	0.31	0.88
D	0.00	339	7.18	-0.14	-9.95(.000)	0.14	0.95

Item 28

```

-----
item:28 (1c7q58)
Cases for this item  4711  Discrimination  0.09
Item Threshold(s):  2.21  Weighted MNSQ  1.17
Item Delta(s):      2.21
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-1.97(.049)	-0.87	1.07
9	0.00	32	0.68	-0.01	-1.01(.312)	0.23	0.85
A	0.00	950	20.17	-0.02	-1.11(.265)	0.55	0.93
B	1.00	933	19.80	0.09	6.02(.000)	0.72	1.04
C	0.00	1096	23.26	-0.06	-4.40(.000)	0.47	0.86
D	0.00	1698	36.04	0.00	0.07(.941)	0.58	0.88

```

-----
The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 0.83% of the data are missing.
-----

```

The following results are scaled to assume that a single response was provided for each item.

```

N 4833
Mean 16.54
Standard Deviation 4.85
Variance 23.53
Skewness -0.30
Kurtosis -0.16
Standard error of mean 0.07
Standard error of measurement 2.22
Coefficient Alpha 0.79
-----

```

Appendix B.10 Year 7 Numeracy

=====

NAPLAN 2013, Calibration, Grade 7, Numeracy
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (n7CAq01)
Cases for this item 4773 Discrimination 0.42
Item Threshold(s): -1.75 Weighted MNSQ 0.94
Item Delta(s): -1.75

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	39	0.82	-0.07	-4.89(.000)	-1.23	1.08
A	1.00	3716	77.85	0.42	32.10(.000)	0.05	1.08
B	0.00	263	5.51	-0.18	-12.99(.000)	-1.03	0.97
C	0.00	569	11.92	-0.30	-21.64(.000)	-1.05	0.76
D	0.00	186	3.90	-0.15	-10.69(.000)	-1.00	0.94

=====

Item 2

item:2 (n7CAq02)
Cases for this item 4773 Discrimination 0.40
Item Threshold(s): -2.05 Weighted MNSQ 0.95
Item Delta(s): -2.05

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	63	1.32	-0.11	-7.49(.000)	-1.20	0.88
9	0.00	31	0.65	-0.06	-4.28(.000)	-1.04	0.76
A	0.00	285	5.97	-0.22	-15.81(.000)	-1.15	0.80
B	0.00	275	5.76	-0.21	-14.86(.000)	-1.11	0.82
C	1.00	3915	82.02	0.40	30.26(.000)	0.01	1.08
D	0.00	204	4.27	-0.17	-12.11(.000)	-1.06	0.86

=====

Item 3

item:3 (n7CAq03)
Cases for this item 4773 Discrimination 0.35
Item Threshold(s): -1.19 Weighted MNSQ 1.06
Item Delta(s): -1.19

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.02	-1.50(.133)	-1.80	0.00
9	0.00	37	0.78	-0.05	-3.52(.000)	-0.88	0.87
A	0.00	631	13.22	-0.16	-11.04(.000)	-0.62	0.92
B	0.00	239	5.01	-0.06	-4.01(.000)	-0.48	1.21
C	0.00	344	7.21	-0.18	-12.51(.000)	-0.88	0.93
D	1.00	3277	68.66	0.35	25.76(.000)	0.06	1.09
E	0.00	244	5.11	-0.20	-14.45(.000)	-1.16	0.97

=====

Item 4

```

-----
item:4 (n7CAq04)
Cases for this item  4771  Discrimination  0.38
Item Threshold(s):  -1.23  Weighted MNSQ  1.04
Item Delta(s):      -1.24

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	27	0.57	-0.05	-3.65(.000)	-0.95	0.83
A	0.00	1018	21.34	-0.26	-18.53(.000)	-0.73	0.88
B	0.00	381	7.99	-0.22	-15.42(.000)	-0.99	0.89
C	1.00	3319	69.57	0.38	28.69(.000)	0.08	1.11
D	0.00	26	0.54	-0.10	-6.87(.000)	-1.70	0.87

Item 5

```

-----
item:5 (n7CAq05)
Cases for this item  4771  Discrimination  0.40
Item Threshold(s):  -1.64  Weighted MNSQ  0.98
Item Delta(s):      -1.64

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	37	0.78	-0.05	-3.72(.000)	-1.05	1.10
A	0.00	633	13.27	-0.25	-17.63(.000)	-0.87	0.88
B	0.00	325	6.81	-0.24	-17.39(.000)	-1.19	0.86
C	1.00	3635	76.19	0.40	30.20(.000)	0.05	1.08
D	0.00	141	2.96	-0.12	-8.43(.000)	-0.95	0.89

Item 6

```

-----
item:6 (n7CAq06)
Cases for this item  4768  Discrimination  0.35
Item Threshold(s):  -1.27  Weighted MNSQ  1.04
Item Delta(s):      -1.28

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.02	-1.50(.133)	-2.41	0.00
9	0.00	105	2.20	-0.06	-4.42(.000)	-0.71	1.12
A	0.00	449	9.42	-0.16	-11.14(.000)	-0.71	0.98
B	0.00	220	4.61	-0.18	-12.96(.000)	-1.08	0.82
C	0.00	644	13.51	-0.20	-13.85(.000)	-0.73	1.05
D	1.00	3349	70.24	0.35	26.19(.000)	0.06	1.08

Item 7

```

-----
item:7 (n7CAq07)
Cases for this item  4768  Discrimination  0.43
Item Threshold(s):  -0.85  Weighted MNSQ  1.02
Item Delta(s):      -0.85

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	80	1.68	-0.03	-2.13(.033)	-0.46	0.91
A	0.00	974	20.43	-0.34	-24.98(.000)	-0.91	0.82
B	1.00	2981	62.52	0.43	32.52(.000)	0.16	1.11
C	0.00	388	8.14	-0.15	-10.29(.000)	-0.75	0.93
D	0.00	345	7.24	-0.10	-6.65(.000)	-0.54	0.91

Item 8

```

-----
item:8 (n7CAq08)
Cases for this item  4768  Discrimination  0.33
Item Threshold(s):  -1.22  Weighted MNSQ  1.10
Item Delta(s):      -1.22

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.01	0.40(.689)	-0.23	0.00
9	0.00	20	0.42	-0.03	-2.04(.042)	-0.82	0.99
A	0.00	300	6.29	-0.14	-9.58(.000)	-0.81	0.99
B	0.00	560	11.74	-0.18	-12.57(.000)	-0.74	0.90
C	1.00	3304	69.30	0.33	24.16(.000)	0.05	1.12
D	0.00	583	12.23	-0.18	-12.76(.000)	-0.70	0.94

Item 9

```

-----
item:9 (n7CAq09)
Cases for this item  4767  Discrimination  0.51
Item Threshold(s):  -0.78  Weighted MNSQ  0.93
Item Delta(s):      -0.78

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-1.93(.054)	-1.59	0.01
9	0.00	41	0.86	-0.06	-4.07(.000)	-0.88	0.93
A	0.00	240	5.03	-0.17	-12.07(.000)	-1.00	0.86
B	0.00	211	4.43	-0.27	-19.04(.000)	-1.51	0.61
C	0.00	1249	26.20	-0.31	-22.24(.000)	-0.73	0.79
D	0.00	107	2.24	-0.11	-7.91(.000)	-1.07	0.98
E	1.00	2917	61.19	0.51	41.27(.000)	0.24	1.07

Item 10

```

-----
item:10 (n7CAq10)
Cases for this item  4767  Discrimination  0.39
Item Threshold(s):  -0.98  Weighted MNSQ  1.05
Item Delta(s):      -0.99

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.02	-1.50(.133)	-2.41	0.00
9	0.00	38	0.80	-0.08	-5.47(.000)	-1.14	0.82
A	0.00	942	19.76	-0.11	-7.93(.000)	-0.44	0.88
B	1.00	3099	65.01	0.39	28.94(.000)	0.11	1.11
C	0.00	301	6.31	-0.18	-12.62(.000)	-0.92	0.87
D	0.00	386	8.10	-0.32	-23.49(.000)	-1.37	0.72

Item 11

```

-----
item:11 (n7CAq11)
Cases for this item  4766  Discrimination  0.31
Item Threshold(s):  -0.74  Weighted MNSQ  1.15
Item Delta(s):      -0.74

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.10	-0.05	-3.15(.002)	-1.89	0.96
9	0.00	86	1.80	-0.04	-3.06(.002)	-0.56	1.06
A	1.00	2879	60.41	0.31	22.43(.000)	0.07	1.12
B	0.00	1315	27.59	-0.15	-10.18(.000)	-0.44	1.00
C	0.00	401	8.41	-0.23	-16.07(.000)	-0.98	0.87
D	0.00	80	1.68	-0.12	-8.45(.000)	-1.27	0.84

Item 12

```

-----
item:12 (n7CAq12)
Cases for this item  4766  Discrimination  0.51
Item Threshold(s):  -0.93  Weighted MNSQ  0.93
Item Delta(s):      -0.93
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.02	-1.50(.133)	-2.41	0.00
9	0.00	32	0.67	-0.05	-3.26(.001)	-0.90	0.95
A	0.00	326	6.84	-0.17	-12.26(.000)	-0.85	0.85
B	0.00	619	12.99	-0.26	-18.89(.000)	-0.92	0.85
C	0.00	738	15.48	-0.29	-21.26(.000)	-0.93	0.76
D	1.00	3050	63.99	0.51	40.64(.000)	0.21	1.08

Item 13

```

-----
item:13 (n7CAq13)
Cases for this item  4765  Discrimination  0.52
Item Threshold(s):  -0.30  Weighted MNSQ  0.93
Item Delta(s):      -0.30
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.00	-0.02(.984)	0.04	0.00
9	0.00	19	0.40	-0.03	-2.34(.019)	-0.93	1.26
A	1.00	2465	51.73	0.52	41.68(.000)	0.34	1.06
B	0.00	411	8.63	-0.24	-16.87(.000)	-1.01	0.82
C	0.00	678	14.23	-0.25	-17.72(.000)	-0.85	0.98
D	0.00	1191	24.99	-0.24	-16.84(.000)	-0.62	0.84

Item 14

```

-----
item:14 (n7CAq14)
Cases for this item  4765  Discrimination  0.53
Item Threshold(s):  -0.59  Weighted MNSQ  0.91
Item Delta(s):      -0.59
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.03	-2.01(.045)	-1.59	0.87
9	0.00	59	1.24	-0.08	-5.42(.000)	-1.02	0.92
A	0.00	509	10.68	-0.27	-19.04(.000)	-1.02	0.73
B	0.00	1177	24.70	-0.31	-22.56(.000)	-0.76	0.81
C	1.00	2734	57.38	0.53	43.66(.000)	0.30	1.09
D	0.00	283	5.94	-0.16	-11.49(.000)	-0.87	0.77

Item 15

```

-----
item:15 (n7CAq15)
Cases for this item  4765  Discrimination  0.42
Item Threshold(s):  -0.01  Weighted MNSQ  1.05
Item Delta(s):      -0.01
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	29	0.61	-0.04	-2.95(.003)	-0.90	1.21
A	0.00	357	7.49	-0.09	-6.13(.000)	-0.51	0.90
B	1.00	2187	45.90	0.42	32.24(.000)	0.30	1.14
C	0.00	739	15.51	-0.10	-6.80(.000)	-0.44	0.92
D	0.00	1111	23.32	-0.22	-15.64(.000)	-0.62	0.94
E	0.00	342	7.18	-0.21	-15.16(.000)	-1.01	0.82

Item 16

```

-----
item:16 (n7CAq16)
Cases for this item  4764  Discrimination  0.36
Item Threshold(s):  -0.41  Weighted MNSQ  1.11
Item Delta(s):      -0.41

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.02	-1.45(.146)	-1.97	2.17
9	0.00	73	1.53	-0.03	-2.39(.017)	-0.55	1.14
A	1.00	2571	53.97	0.36	26.98(.000)	0.17	1.15
B	0.00	787	16.52	-0.10	-7.21(.000)	-0.44	0.97
C	0.00	913	19.16	-0.22	-15.69(.000)	-0.70	0.91
D	0.00	418	8.77	-0.18	-12.63(.000)	-0.81	0.83

Item 17

```

-----
item:17 (n7CAq17)
Cases for this item  4764  Discrimination  0.47
Item Threshold(s):   0.10  Weighted MNSQ  1.00
Item Delta(s):      0.10

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	55	1.15	-0.02	-1.37(.170)	-0.44	1.16
A	0.00	323	6.78	-0.03	-2.19(.029)	-0.32	1.03
B	1.00	2083	43.72	0.47	36.33(.000)	0.38	1.13
C	0.00	400	8.40	-0.12	-8.59(.000)	-0.62	1.05
D	0.00	1903	39.95	-0.38	-28.46(.000)	-0.69	0.83

Item 18

```

-----
item:18 (n7CAq18)
Cases for this item  4762  Discrimination  0.51
Item Threshold(s):   0.38  Weighted MNSQ  0.95
Item Delta(s):      0.38

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.02	-1.50(.133)	-2.41	0.00
9	0.00	62	1.30	-0.07	-4.59(.000)	-0.77	0.93
A	0.00	1615	33.91	-0.17	-11.95(.000)	-0.45	0.95
B	0.00	850	17.85	-0.29	-21.06(.000)	-0.86	0.86
C	0.00	402	8.44	-0.17	-11.92(.000)	-0.79	0.87
D	1.00	1832	38.47	0.51	40.83(.000)	0.50	1.06

Item 19

```

-----
item:19 (n7CAq19)
Cases for this item  4760  Discrimination  0.30
Item Threshold(s):   0.23  Weighted MNSQ  1.19
Item Delta(s):      0.23

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	9	0.19	-0.03	-1.73(.085)	-0.87	1.05
9	0.00	101	2.12	-0.05	-3.13(.002)	-0.60	1.13
A	0.00	947	19.89	-0.13	-9.24(.000)	-0.49	0.97
B	0.00	1302	27.35	-0.14	-9.60(.000)	-0.43	0.94
C	1.00	1959	41.16	0.30	21.35(.000)	0.20	1.22
D	0.00	442	9.29	-0.08	-5.59(.000)	-0.46	1.00

Item 20

```

-----
item:20 (n7CAq20)
Cases for this item  4759  Discrimination  0.43
Item Threshold(s):  0.35  Weighted MNSQ  1.03
Item Delta(s):      0.35

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.00	-0.01(.992)	0.04	0.67
9	0.00	60	1.26	-0.04	-2.58(.010)	-0.57	1.11
A	0.00	699	14.69	-0.18	-12.76(.000)	-0.67	0.94
B	1.00	1855	38.98	0.43	32.51(.000)	0.38	1.21
C	0.00	904	19.00	-0.14	-9.89(.000)	-0.52	0.92
D	0.00	1238	26.01	-0.19	-13.40(.000)	-0.53	0.83

Item 21

```

-----
item:21 (n7CAq21)
Cases for this item  4757  Discrimination  0.40
Item Threshold(s):  0.46  Weighted MNSQ  1.07
Item Delta(s):      0.46

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	35	0.74	-0.04	-2.84(.005)	-0.87	1.35
A	0.00	666	14.00	-0.14	-9.76(.000)	-0.55	1.01
B	0.00	1330	27.96	-0.22	-15.62(.000)	-0.57	0.94
C	0.00	970	20.39	-0.11	-7.45(.000)	-0.43	0.99
D	1.00	1756	36.91	0.40	30.38(.000)	0.38	1.13

Item 22

```

-----
item:22 (n7CAq22)
Cases for this item  4750  Discrimination  0.27
Item Threshold(s):  0.21  Weighted MNSQ  1.21
Item Delta(s):      0.21

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.01	-0.52(.604)	-0.83	1.44
9	0.00	173	3.64	-0.01	-0.89(.372)	-0.33	1.02
A	0.00	1249	26.29	-0.17	-11.88(.000)	-0.50	0.88
B	1.00	1982	41.73	0.27	19.46(.000)	0.17	1.26
C	0.00	1141	24.02	-0.08	-5.40(.000)	-0.34	0.95
D	0.00	202	4.25	-0.12	-7.99(.000)	-0.77	1.08

Item 23

```

-----
item:23 (n7CAq23)
Cases for this item  4745  Discrimination  0.44
Item Threshold(s):  0.64  Weighted MNSQ  1.01
Item Delta(s):      0.64

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	125	2.63	-0.04	-2.93(.003)	-0.55	1.02
A	1.00	1599	33.70	0.44	34.14(.000)	0.49	1.16
B	0.00	2137	45.04	-0.15	-10.79(.000)	-0.38	0.91
C	0.00	695	14.65	-0.28	-19.93(.000)	-0.90	0.82
D	0.00	189	3.98	-0.14	-9.90(.000)	-0.92	1.10

Item 24

```

-----
item:24 (n7CAq24)
Cases for this item  4738  Discrimination  0.52
Item Threshold(s):  1.03  Weighted MNSQ  0.91
Item Delta(s):      1.03
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3361	70.94	-0.49	-38.54(.000)	-0.52	0.92
1	1.00	1287	27.16	0.52	41.84(.000)	0.73	1.09
9	0.00	90	1.90	-0.07	-4.65(.000)	-0.74	1.06

Item 25

```

-----
item:25 (n7CAq25)
Cases for this item  4718  Discrimination  0.57
Item Threshold(s):  0.98  Weighted MNSQ  0.85
Item Delta(s):      0.98
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2942	62.36	-0.49	-39.07(.000)	-0.59	0.88
1	1.00	1322	28.02	0.57	48.22(.000)	0.81	1.06
9	0.00	454	9.62	-0.06	-4.32(.000)	-0.45	0.93

Item 26

```

-----
item:26 (n7CAq26)
Cases for this item  4671  Discrimination  0.54
Item Threshold(s):  1.50  Weighted MNSQ  0.87
Item Delta(s):      1.50
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3369	72.13	-0.44	-33.29(.000)	-0.47	0.94
1	1.00	957	20.49	0.54	44.12(.000)	0.99	1.03
9	0.00	345	7.39	-0.09	-5.91(.000)	-0.53	0.89

Item 27

```

-----
item:27 (n7CAq27)
Cases for this item  4645  Discrimination  0.50
Item Threshold(s):  1.77  Weighted MNSQ  0.89
Item Delta(s):      1.78
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3505	75.46	-0.41	-30.45(.000)	-0.43	0.97
1	1.00	791	17.03	0.50	39.48(.000)	1.04	1.05
9	0.00	349	7.51	-0.05	-3.32(.001)	-0.42	0.91

Item 28

```

-----
item:28 (n7CAq28)
Cases for this item  4603  Discrimination  0.33
Item Threshold(s):  2.02  Weighted MNSQ  1.05
Item Delta(s):      2.02
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3368	73.17	-0.28	-19.65(.000)	-0.36	1.03
1	1.00	664	14.43	0.33	23.54(.000)	0.71	1.23
9	0.00	571	12.40	0.02	1.66(.096)	-0.15	1.01

Item 29

```

-----
item:29 (n7CAq29)
Cases for this item  4527  Discrimination  0.51
Item Threshold(s):  1.81  Weighted MNSQ  0.88
Item Delta(s):      1.82
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3564	78.73	-0.48	-36.63(.000)	-0.45	0.96
1	1.00	751	16.59	0.51	40.20(.000)	1.08	1.04
9	0.00	212	4.68	0.02	1.55(.121)	-0.11	1.04

Item 30

```

-----
item:30 (n7CAq30)
Cases for this item  4464  Discrimination  0.31
Item Threshold(s):  2.57  Weighted MNSQ  1.07
Item Delta(s):      2.57
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3815	85.46	-0.25	-17.36(.000)	-0.29	1.08
1	1.00	428	9.59	0.31	21.54(.000)	0.87	1.08
9	0.00	221	4.95	-0.01	-0.51(.607)	-0.23	0.98

Item 31

```

-----
item:31 (n7CAq31)
Cases for this item  4367  Discrimination  0.33
Item Threshold(s):  2.17  Weighted MNSQ  1.02
Item Delta(s):      2.17
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3448	78.96	-0.30	-20.42(.000)	-0.35	1.01
1	1.00	564	12.92	0.33	23.21(.000)	0.81	1.35
9	0.00	355	8.13	0.03	2.23(.026)	-0.09	1.04

Item 32

```

-----
item:32 (n7CAq32)
Cases for this item  4161  Discrimination  0.49
Item Threshold(s):  2.41  Weighted MNSQ  0.87
Item Delta(s):      2.41
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3372	81.04	-0.34	-23.11(.000)	-0.36	0.98
1	1.00	454	10.91	0.49	35.81(.000)	1.40	1.10
9	0.00	335	8.05	-0.07	-4.54(.000)	-0.46	0.98

Item 33

```

-----
item:33 (n7NCq01)
Cases for this item  4759  Discrimination  0.21
Item Threshold(s):  -3.65  Weighted MNSQ  0.97
Item Delta(s):      -3.65
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.69(.487)	-0.85	0.00
9	0.00	6	0.13	-0.02	-1.66(.098)	-1.07	1.39
A	1.00	4527	95.13	0.21	15.02(.000)	-0.14	1.11
B	0.00	95	2.00	-0.13	-9.37(.000)	-1.23	0.97
C	0.00	36	0.76	-0.09	-6.49(.000)	-1.42	0.93
D	0.00	94	1.98	-0.13	-8.93(.000)	-1.12	1.04

Item 34

```

-----
item:34 (n7NCq02)
Cases for this item  4759  Discrimination  0.19
Item Threshold(s):  -3.38  Weighted MNSQ  1.00
Item Delta(s):      -3.38
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	276	5.80	-0.18	-12.31(.000)	-0.95	1.08
1	1.00	4464	93.80	0.19	13.41(.000)	-0.14	1.11
9	0.00	19	0.40	-0.08	-5.46(.000)	-1.64	0.93

Item 35

```

-----
item:35 (n7NCq03)
Cases for this item  4759  Discrimination  0.39
Item Threshold(s):  -2.07  Weighted MNSQ  0.93
Item Delta(s):      -2.07
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.01	-0.77(.439)	-0.78	0.49
9	0.00	16	0.34	-0.05	-3.17(.002)	-1.38	1.23
A	0.00	89	1.87	-0.09	-6.49(.000)	-0.95	1.06
B	0.00	190	3.99	-0.25	-17.76(.000)	-1.52	0.78
C	1.00	3916	82.29	0.39	29.51(.000)	0.00	1.07
D	0.00	546	11.47	-0.27	-19.28(.000)	-0.99	0.85

Item 36

```

-----
item:36 (n7NCq04)
Cases for this item  4758  Discrimination  0.42
Item Threshold(s):  -2.31  Weighted MNSQ  0.89
Item Delta(s):      -2.31
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	14	0.29	-0.03	-1.77(.076)	-0.78	1.13
A	1.00	4050	85.12	0.42	32.12(.000)	-0.00	1.07
B	0.00	328	6.89	-0.30	-21.31(.000)	-1.36	0.72
C	0.00	328	6.89	-0.24	-17.27(.000)	-1.14	0.79
D	0.00	38	0.80	-0.14	-9.81(.000)	-1.98	0.50

Item 37

```

-----
item:37 (n7NCq05)
Cases for this item  4757  Discrimination  0.53
Item Threshold(s):  -1.51  Weighted MNSQ  0.85
Item Delta(s):      -1.51
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	14	0.29	-0.03	-2.07(.038)	-1.21	1.20
A	0.00	244	5.13	-0.24	-17.31(.000)	-1.33	0.76
B	0.00	165	3.47	-0.22	-15.41(.000)	-1.43	0.67
C	0.00	588	12.36	-0.32	-23.19(.000)	-1.10	0.70
D	0.00	219	4.60	-0.16	-10.89(.000)	-0.96	0.87
E	1.00	3527	74.14	0.53	43.29(.000)	0.15	1.03

Item 38

```

-----
item:38 (n7NCq06)
Cases for this item  4755  Discrimination  0.29
Item Threshold(s):  -1.77  Weighted MNSQ  1.06
Item Delta(s):      -1.77
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	16	0.34	-0.01	-0.81(.418)	-0.54	1.06
A	0.00	87	1.83	-0.16	-11.53(.000)	-1.59	0.77
B	0.00	411	8.64	-0.24	-16.69(.000)	-1.00	0.93
C	0.00	521	10.96	-0.10	-6.64(.000)	-0.51	1.07
D	1.00	3720	78.23	0.29	20.73(.000)	-0.02	1.09

Item 39

```

-----
item:39 (n7NCq07)
Cases for this item  4754  Discrimination  0.42
Item Threshold(s):  -1.39  Weighted MNSQ  0.97
Item Delta(s):      -1.39
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.02	-1.25(.210)	-0.86	0.60
9	0.00	3	0.06	-0.04	-2.69(.007)	-2.30	0.45
A	0.00	42	0.88	-0.09	-6.40(.000)	-1.32	0.97
B	0.00	1034	21.75	-0.32	-23.30(.000)	-0.85	0.91
C	1.00	3436	72.28	0.42	32.02(.000)	0.09	1.07
D	0.00	236	4.96	-0.21	-15.08(.000)	-1.23	0.84

Item 40

```

-----
item:40 (n7NCq08)
Cases for this item  4753  Discrimination  0.52
Item Threshold(s):  -0.81  Weighted MNSQ  0.91
Item Delta(s):      -0.81
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	23	0.48	-0.06	-4.34(.000)	-1.29	0.95
A	0.00	327	6.88	-0.14	-10.06(.000)	-0.80	0.94
B	0.00	1060	22.30	-0.36	-26.87(.000)	-0.92	0.83
C	0.00	406	8.54	-0.22	-15.53(.000)	-0.94	0.84
D	1.00	2937	61.79	0.52	42.17(.000)	0.25	1.04

Item 41

```

-----
item:41 (n7NCq09)
Cases for this item 4753 Discrimination 0.38
Item Threshold(s): -0.55 Weighted MNSQ 1.08
Item Delta(s): -0.54
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-1.86(.064)	-1.40	1.40
9	0.00	55	1.16	-0.07	-4.52(.000)	-0.95	1.07
A	0.00	680	14.31	-0.04	-2.71(.007)	-0.28	1.01
B	1.00	2689	56.57	0.38	28.10(.000)	0.16	1.10
C	0.00	362	7.62	-0.24	-17.13(.000)	-1.07	0.84
D	0.00	965	20.30	-0.25	-18.04(.000)	-0.72	0.92

Item 42

```

-----
item:42 (n7NCq10)
Cases for this item 4752 Discrimination 0.46
Item Threshold(s): -0.83 Weighted MNSQ 0.97
Item Delta(s): -0.83
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.60(.545)	-0.48	0.00
9	0.00	19	0.40	-0.01	-1.00(.319)	-0.45	0.99
A	1.00	2950	62.08	0.46	35.93(.000)	0.20	1.06
B	0.00	818	17.21	-0.24	-17.36(.000)	-0.78	0.97
C	0.00	262	5.51	-0.14	-10.00(.000)	-0.84	0.90
D	0.00	702	14.77	-0.28	-19.87(.000)	-0.89	0.88

Item 43

```

-----
item:43 (n7NCq11)
Cases for this item 4752 Discrimination 0.39
Item Threshold(s): -0.81 Weighted MNSQ 1.06
Item Delta(s): -0.81
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.87(.061)	-2.39	0.00
9	0.00	15	0.32	-0.05	-3.61(.000)	-1.30	1.26
A	0.00	1091	22.96	-0.18	-12.36(.000)	-0.52	0.93
B	0.00	380	8.00	-0.26	-18.79(.000)	-1.16	0.77
C	1.00	2935	61.76	0.39	29.28(.000)	0.14	1.11
D	0.00	330	6.94	-0.16	-11.30(.000)	-0.82	0.90

Item 44

```

-----
item:44 (n7NCq12)
Cases for this item 4750 Discrimination 0.41
Item Threshold(s): -0.80 Weighted MNSQ 1.03
Item Delta(s): -0.80
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.11	-0.02	-1.30(.195)	-0.56	0.50
9	0.00	18	0.38	-0.01	-0.81(.416)	-0.48	1.26
A	0.00	284	5.98	-0.11	-7.74(.000)	-0.67	0.92
B	1.00	2924	61.56	0.41	31.38(.000)	0.16	1.08
C	0.00	588	12.38	-0.06	-4.23(.000)	-0.35	1.00
D	0.00	931	19.60	-0.39	-28.93(.000)	-1.04	0.85

Item 45

```

-----
item:45 (n7NCq13)
Cases for this item  4750  Discrimination  0.41
Item Threshold(s):  -0.09  Weighted MNSQ  1.06
Item Delta(s):      -0.09

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.01	-0.77(.441)	-0.59	0.97
9	0.00	26	0.55	-0.03	-2.32(.020)	-0.72	1.20
A	0.00	260	5.47	-0.18	-12.62(.000)	-1.03	0.86
B	1.00	2260	47.58	0.41	31.42(.000)	0.28	1.15
C	0.00	797	16.78	-0.21	-14.91(.000)	-0.69	0.88
D	0.00	1404	29.56	-0.19	-12.98(.000)	-0.50	0.91

Item 46

```

-----
item:46 (n7NCq14)
Cases for this item  4750  Discrimination  0.48
Item Threshold(s):  -0.64  Weighted MNSQ  0.96
Item Delta(s):      -0.64

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	49	1.03	-0.06	-4.16(.000)	-0.94	1.24
A	0.00	797	16.78	-0.24	-17.14(.000)	-0.78	0.88
B	0.00	939	19.77	-0.33	-23.70(.000)	-0.88	0.78
C	1.00	2776	58.44	0.48	38.11(.000)	0.25	1.09
D	0.00	189	3.98	-0.06	-4.49(.000)	-0.55	0.94

Item 47

```

-----
item:47 (n7NCq15)
Cases for this item  4747  Discrimination  0.43
Item Threshold(s):  -0.22  Weighted MNSQ  1.04
Item Delta(s):      -0.22

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.11	-0.03	-1.96(.050)	-1.00	0.95
9	0.00	45	0.95	-0.04	-2.49(.013)	-0.63	1.44
A	0.00	138	2.91	-0.17	-12.02(.000)	-1.30	0.73
B	0.00	1701	35.83	-0.29	-20.98(.000)	-0.60	0.89
C	1.00	2379	50.12	0.43	32.71(.000)	0.27	1.11
D	0.00	479	10.09	-0.14	-9.58(.000)	-0.63	1.03

Item 48

```

-----
item:48 (n7NCq16)
Cases for this item  4747  Discrimination  0.62
Item Threshold(s):  0.32  Weighted MNSQ  0.82
Item Delta(s):      0.32

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.70(.486)	-0.68	0.00
9	0.00	21	0.44	-0.05	-3.60(.000)	-1.14	1.32
A	0.00	1540	32.44	-0.29	-21.16(.000)	-0.64	0.77
B	1.00	1878	39.56	0.62	53.83(.000)	0.62	1.04
C	0.00	211	4.44	-0.06	-3.91(.000)	-0.49	0.94
D	0.00	291	6.13	-0.21	-14.57(.000)	-1.06	0.75
E	0.00	805	16.96	-0.26	-18.78(.000)	-0.81	0.85

Item 49

```

-----
item:49 (n7NCq17)
Cases for this item  4747  Discrimination  0.50
Item Threshold(s):  -0.09  Weighted MNSQ  0.96
Item Delta(s):      -0.08
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	55	1.16	-0.07	-4.97(.000)	-0.96	0.97
A	0.00	178	3.75	-0.16	-11.21(.000)	-1.11	0.81
B	0.00	732	15.42	-0.27	-18.98(.000)	-0.84	0.93
C	0.00	1531	32.25	-0.25	-17.74(.000)	-0.58	0.81
D	1.00	2251	47.42	0.50	39.99(.000)	0.38	1.11

Item 50

```

-----
item:50 (n7NCq18)
Cases for this item  4747  Discrimination  0.58
Item Threshold(s):   0.06  Weighted MNSQ  0.87
Item Delta(s):      0.07
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2016	42.47	-0.44	-34.13(.000)	-0.74	0.85
1	1.00	2111	44.47	0.58	49.59(.000)	0.51	1.02
9	0.00	620	13.06	-0.21	-14.82(.000)	-0.80	0.89

Item 51

```

-----
item:51 (n7NCq19)
Cases for this item  4747  Discrimination  0.55
Item Threshold(s):  -0.02  Weighted MNSQ  0.90
Item Delta(s):      -0.02
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.00	0.06(.952)	-0.03	0.00
9	0.00	18	0.38	-0.05	-3.45(.001)	-1.30	1.24
A	0.00	1227	25.85	-0.43	-32.47(.000)	-0.96	0.80
B	0.00	297	6.26	-0.16	-10.88(.000)	-0.85	0.83
C	1.00	2196	46.26	0.55	45.64(.000)	0.45	1.04
D	0.00	953	20.08	-0.10	-7.21(.000)	-0.41	0.87
E	0.00	55	1.16	-0.06	-3.99(.000)	-0.73	0.98

Item 52

```

-----
item:52 (n7NCq20)
Cases for this item  4747  Discrimination  0.31
Item Threshold(s):   0.10  Weighted MNSQ  1.17
Item Delta(s):      0.10
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.53(.597)	-0.89	0.00
9	0.00	74	1.56	-0.05	-3.76(.000)	-0.76	1.10
A	0.00	251	5.29	-0.01	-0.96(.336)	-0.27	1.05
B	1.00	2075	43.71	0.31	22.55(.000)	0.20	1.18
C	0.00	1643	34.61	-0.16	-11.36(.000)	-0.43	0.96
D	0.00	703	14.81	-0.19	-13.22(.000)	-0.68	0.96

Item 53

```

-----
item:53 (n7NCq21)
Cases for this item  4746  Discrimination  0.39
Item Threshold(s):  -0.06  Weighted MNSQ  1.08
Item Delta(s):      -0.06

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.02	-1.05(.293)	-1.30	1.26
9	0.00	86	1.81	-0.04	-2.80(.005)	-0.54	1.05
A	1.00	2228	46.94	0.39	29.52(.000)	0.26	1.15
B	0.00	1275	26.86	-0.15	-10.22(.000)	-0.45	0.89
C	0.00	759	15.99	-0.16	-11.21(.000)	-0.57	0.95
D	0.00	258	5.44	-0.20	-14.04(.000)	-1.07	0.89
E	0.00	138	2.91	-0.13	-8.96(.000)	-1.03	0.96

Item 54

```

-----
item:54 (n7NCq22)
Cases for this item  4746  Discrimination  0.23
Item Threshold(s):  0.65  Weighted MNSQ  1.25
Item Delta(s):      0.65

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.11	-0.01	-0.79(.427)	-0.60	0.97
9	0.00	89	1.88	0.00	0.28(.783)	-0.19	1.05
A	0.00	288	6.07	0.17	12.04(.000)	0.54	1.18
B	1.00	1589	33.48	0.23	16.28(.000)	0.16	1.18
C	0.00	2151	45.32	-0.15	-10.64(.000)	-0.37	1.00
D	0.00	624	13.15	-0.22	-15.43(.000)	-0.79	0.92

Item 55

```

-----
item:55 (n7NCq23)
Cases for this item  4744  Discrimination  0.49
Item Threshold(s):  0.25  Weighted MNSQ  0.98
Item Delta(s):      0.25

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2650	55.86	-0.44	-33.48(.000)	-0.60	0.92
1	1.00	1944	40.98	0.49	38.76(.000)	0.45	1.08
9	0.00	150	3.16	-0.14	-9.58(.000)	-1.10	0.95

Item 56

```

-----
item:56 (n7NCq24)
Cases for this item  4740  Discrimination  0.51
Item Threshold(s):  1.37  Weighted MNSQ  0.91
Item Delta(s):      1.37

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3613	76.22	-0.46	-36.00(.000)	-0.47	0.96
1	1.00	1048	22.11	0.51	40.79(.000)	0.85	1.04
9	0.00	79	1.67	-0.11	-7.72(.000)	-1.20	0.97

Item 57

```

-----
item:57 (n7NCq25)
Cases for this item  4739  Discrimination  0.41
Item Threshold(s):  0.64  Weighted MNSQ  1.04
Item Delta(s):      0.64
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
9	0.00	92	1.94	-0.02	-1.59(.111)	-0.46	1.15
A	1.00	1594	33.64	0.41	31.30(.000)	0.44	1.20
B	0.00	2203	46.49	-0.33	-23.93(.000)	-0.56	0.92
C	0.00	624	13.17	-0.06	-4.26(.000)	-0.35	0.99
D	0.00	226	4.77	-0.04	-2.48(.013)	-0.37	0.84

Item 58

```

-----
item:58 (n7NCq26)
Cases for this item  4737  Discrimination  0.46
Item Threshold(s):  0.96  Weighted MNSQ  0.98
Item Delta(s):      0.96
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
8	0.00	2	0.04	-0.00	-0.27(.784)	-0.50	0.98
9	0.00	31	0.65	-0.05	-3.57(.000)	-0.97	0.94
A	0.00	1548	32.68	-0.17	-11.73(.000)	-0.46	0.93
B	0.00	1319	27.84	-0.25	-17.73(.000)	-0.60	0.92
C	0.00	500	10.56	-0.04	-3.04(.002)	-0.31	1.03
D	1.00	1337	28.22	0.46	35.96(.000)	0.60	1.15

Item 59

```

-----
item:59 (n7NCq27)
Cases for this item  4736  Discrimination  0.28
Item Threshold(s):  2.48  Weighted MNSQ  1.04
Item Delta(s):      2.48
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
0	0.00	3955	83.51	-0.21	-14.93(.000)	-0.29	1.04
1	1.00	483	10.20	0.28	20.04(.000)	0.77	1.35
9	0.00	298	6.29	-0.02	-1.68(.093)	-0.37	1.10

Item 60

```

-----
item:60 (n7NCq28)
Cases for this item  4723  Discrimination  0.52
Item Threshold(s):  1.97  Weighted MNSQ  0.86
Item Delta(s):      1.97
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
0	0.00	3786	80.16	-0.45	-34.39(.000)	-0.42	0.96
1	1.00	700	14.82	0.52	41.64(.000)	1.17	1.02
9	0.00	237	5.02	-0.03	-1.78(.075)	-0.38	1.03

Item 61

```

-----
item:61 (n7NCq29)
Cases for this item  4719  Discrimination  0.33
Item Threshold(s):  2.16  Weighted MNSQ  1.02
Item Delta(s):      2.16
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	0.02	1.05(.293)	0.56	0.53
9	0.00	47	1.00	-0.04	-2.99(.003)	-0.80	1.10
A	0.00	1458	30.90	-0.19	-13.36(.000)	-0.49	0.94
B	0.00	1697	35.96	-0.10	-6.63(.000)	-0.32	0.95
C	0.00	903	19.14	0.07	5.00(.000)	-0.05	1.16
D	1.00	612	12.97	0.33	23.74(.000)	0.77	1.33

Item 62

```

-----
item:62 (n7NCq30)
Cases for this item  4705  Discrimination  0.53
Item Threshold(s):  1.45  Weighted MNSQ  0.88
Item Delta(s):      1.44
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3113	66.16	-0.41	-30.67(.000)	-0.49	0.93
1	1.00	996	21.17	0.53	42.52(.000)	0.94	1.06
9	0.00	596	12.67	-0.07	-4.57(.000)	-0.43	0.93

Item 63

```

-----
item:63 (n7NCq31)
Cases for this item  4588  Discrimination  0.44
Item Threshold(s):  2.63  Weighted MNSQ  0.90
Item Delta(s):      2.63
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3816	83.17	-0.35	-25.62(.000)	-0.34	1.00
1	1.00	423	9.22	0.44	33.12(.000)	1.39	1.11
9	0.00	349	7.61	0.02	1.35(.179)	-0.12	0.93

Item 64

```

-----
item:64 (n7NCq32)
Cases for this item  4536  Discrimination  0.36
Item Threshold(s):  3.30  Weighted MNSQ  0.97
Item Delta(s):      3.30
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	4155	91.60	-0.24	-16.89(.000)	-0.24	1.05
1	1.00	244	5.38	0.36	25.67(.000)	1.50	1.08
9	0.00	137	3.02	-0.08	-5.07(.000)	-0.69	0.94

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 1.31% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	4781
Mean	30.23
Standard Deviation	11.91
Variance	141.81
Skewness	0.36
Kurtosis	-0.48
Standard error of mean	0.17
Standard error of measurement	3.34
Coefficient Alpha	0.92

=====

Appendix B.11 Year 7 Reading

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NAPLAN 2013, Calibration, Grade 7, Reading
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (r7q01)
Cases for this item 4819 Discrimination 0.21
Item Threshold(s): -2.25 Weighted MNSQ 1.03
Item Delta(s): -2.25

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-2.05(.040)	-0.97	0.74
9	0.00	2	0.04	0.00	0.02(.986)	0.72	0.70
A	0.00	142	2.95	-0.14	-9.87(.000)	-0.33	0.87
B	1.00	4367	90.62	0.21	15.10(.000)	0.40	0.88
C	0.00	90	1.87	-0.17	-11.64(.000)	-0.71	0.93
D	0.00	216	4.48	-0.07	-5.12(.000)	0.02	0.97

=====

Item 2

item:2 (r7q02)
Cases for this item 4819 Discrimination 0.48
Item Threshold(s): -1.16 Weighted MNSQ 0.91
Item Delta(s): -1.16

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.98(.048)	-1.49	0.00
9	0.00	8	0.17	-0.05	-3.70(.000)	-0.79	1.00
A	0.00	582	12.08	-0.30	-21.95(.000)	-0.34	0.79
B	0.00	226	4.69	-0.23	-16.64(.000)	-0.56	0.76
C	1.00	3776	78.36	0.48	37.47(.000)	0.55	0.83
D	0.00	226	4.69	-0.22	-15.29(.000)	-0.47	0.78

=====

Item 3

item:3 (r7q03)
Cases for this item 4819 Discrimination 0.46
Item Threshold(s): -2.00 Weighted MNSQ 0.88
Item Delta(s): -2.00

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.98(.048)	-1.49	0.00
9	0.00	7	0.15	-0.04	-2.88(.004)	-0.31	0.90
A	1.00	4263	88.46	0.46	35.58(.000)	0.47	0.84
B	0.00	132	2.74	-0.23	-16.46(.000)	-0.81	0.72
C	0.00	136	2.82	-0.26	-18.64(.000)	-0.96	0.72
D	0.00	280	5.81	-0.27	-19.45(.000)	-0.56	0.70

=====

Item 4

```

-----
item:4 (r7q04)
Cases for this item  4817  Discrimination  0.48
Item Threshold(s):  -2.31  Weighted MNSQ  0.84
Item Delta(s):      -2.31
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.08	-0.05	-3.44(.001)	-1.16	0.32
9	0.00	5	0.10	-0.05	-3.78(.000)	-1.08	1.36
A	0.00	110	2.28	-0.23	-16.11(.000)	-0.96	0.71
B	0.00	186	3.86	-0.32	-23.29(.000)	-1.01	0.61
C	0.00	124	2.57	-0.25	-17.60(.000)	-0.96	0.69
D	1.00	4388	91.09	0.48	38.14(.000)	0.47	0.82

Item 5

```

-----
item:5 (r7q05)
Cases for this item  4816  Discrimination  0.51
Item Threshold(s):  -1.97  Weighted MNSQ  0.83
Item Delta(s):      -1.97
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.22(.001)	-1.62	0.18
9	0.00	12	0.25	-0.08	-5.62(.000)	-1.04	0.71
A	0.00	181	3.76	-0.33	-24.43(.000)	-1.12	0.64
B	0.00	151	3.14	-0.22	-15.34(.000)	-0.69	0.75
C	0.00	221	4.59	-0.28	-20.13(.000)	-0.70	0.62
D	1.00	4249	88.23	0.51	41.03(.000)	0.50	0.81

Item 6

```

-----
item:6 (r7q06)
Cases for this item  4814  Discrimination -0.02
Item Threshold(s):  2.13  Weighted MNSQ  1.20
Item Delta(s):      2.13
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.22(.001)	-1.62	0.18
9	0.00	18	0.37	-0.07	-5.18(.000)	-0.72	1.08
A	1.00	840	17.45	-0.02	-1.69(.091)	0.29	1.06
B	0.00	405	8.41	-0.24	-17.07(.000)	-0.33	0.81
C	0.00	382	7.94	-0.19	-13.30(.000)	-0.20	0.87
D	0.00	3167	65.79	0.28	20.09(.000)	0.51	0.81

Item 7

```

-----
item:7 (r7q07)
Cases for this item  4814  Discrimination  0.35
Item Threshold(s):  -1.17  Weighted MNSQ  1.01
Item Delta(s):      -1.17
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.22(.001)	-1.62	0.18
9	0.00	8	0.17	-0.04	-2.80(.005)	-0.74	1.33
A	1.00	3784	78.60	0.35	25.87(.000)	0.49	0.85
B	0.00	457	9.49	-0.19	-13.07(.000)	-0.15	0.92
C	0.00	306	6.36	-0.17	-12.28(.000)	-0.20	0.83
D	0.00	257	5.34	-0.20	-13.81(.000)	-0.37	0.88

Item 8

```

-----
item:8 (r7q08)
Cases for this item 4814 Discrimination 0.37
Item Threshold(s): -0.33 Weighted MNSQ 1.04
Item Delta(s): -0.33

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.05	-3.64(.000)	-1.55	0.17
9	0.00	18	0.37	-0.03	-2.26(.024)	-0.25	1.09
A	1.00	3075	63.88	0.37	27.30(.000)	0.57	0.84
B	0.00	619	12.86	-0.22	-16.01(.000)	-0.16	0.86
C	0.00	440	9.14	-0.20	-14.46(.000)	-0.19	0.80
D	0.00	659	13.69	-0.11	-7.82(.000)	0.08	0.91

Item 9

```

-----
item:9 (r7q09)
Cases for this item 4813 Discrimination 0.28
Item Threshold(s): 0.53 Weighted MNSQ 1.11
Item Delta(s): 0.53

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.03	-1.81(.070)	-0.85	0.90
9	0.00	21	0.44	-0.07	-4.91(.000)	-0.60	1.12
A	0.00	221	4.59	-0.19	-13.65(.000)	-0.42	0.98
B	1.00	2208	45.88	0.28	20.39(.000)	0.61	0.87
C	0.00	630	13.09	-0.04	-2.60(.009)	0.25	0.99
D	0.00	1731	35.97	-0.17	-12.08(.000)	0.14	0.78

Item 10

```

-----
item:10 (r7q10)
Cases for this item 4809 Discrimination 0.45
Item Threshold(s): -0.64 Weighted MNSQ 0.96
Item Delta(s): -0.64

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.03	-2.09(.037)	-0.78	0.65
9	0.00	95	1.98	-0.08	-5.86(.000)	-0.16	0.84
A	0.00	696	14.47	-0.26	-18.99(.000)	-0.21	0.77
B	0.00	254	5.28	-0.19	-13.64(.000)	-0.36	0.98
C	0.00	405	8.42	-0.20	-14.47(.000)	-0.20	0.80
D	1.00	3356	69.79	0.45	34.66(.000)	0.59	0.83

Item 11

```

-----
item:11 (r7q11)
Cases for this item 4809 Discrimination 0.36
Item Threshold(s): -1.29 Weighted MNSQ 0.99
Item Delta(s): -1.29

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.99(.047)	-1.49	0.00
9	0.00	12	0.25	-0.05	-3.32(.001)	-0.47	1.21
A	1.00	3860	80.27	0.36	26.69(.000)	0.49	0.85
B	0.00	91	1.89	-0.20	-14.17(.000)	-0.87	0.79
C	0.00	727	15.12	-0.22	-15.47(.000)	-0.09	0.81
D	0.00	118	2.45	-0.23	-16.07(.000)	-0.82	0.85

Item 12

```

-----
item:12 (r7q12)
Cases for this item  4809  Discrimination  0.46
Item Threshold(s):  -0.88  Weighted MNSQ  0.94
Item Delta(s):      -0.88

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.03	-1.99(.047)	-1.49	0.00
9	0.00	14	0.29	-0.06	-3.95(.000)	-0.49	1.23
A	0.00	529	11.00	-0.30	-21.94(.000)	-0.37	0.77
B	0.00	587	12.21	-0.23	-16.58(.000)	-0.18	0.79
C	0.00	123	2.56	-0.17	-11.62(.000)	-0.56	0.92
D	1.00	3555	73.92	0.46	35.50(.000)	0.57	0.83

Item 13

```

-----
item:13 (r7q13)
Cases for this item  4809  Discrimination  0.47
Item Threshold(s):  -1.98  Weighted MNSQ  0.85
Item Delta(s):      -1.99

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.23(.001)	-1.62	0.18
9	0.00	14	0.29	-0.06	-4.50(.000)	-0.80	0.98
A	0.00	335	6.97	-0.39	-29.10(.000)	-0.87	0.74
B	0.00	57	1.19	-0.13	-9.17(.000)	-0.65	0.72
C	1.00	4252	88.42	0.47	37.40(.000)	0.49	0.82
D	0.00	149	3.10	-0.20	-14.21(.000)	-0.62	0.67

Item 14

```

-----
item:14 (r7q14)
Cases for this item  4806  Discrimination  0.42
Item Threshold(s):  -0.24  Weighted MNSQ  0.99
Item Delta(s):      -0.24

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.24(.001)	-1.62	0.18
9	0.00	28	0.58	-0.08	-5.35(.000)	-0.55	0.82
A	0.00	258	5.37	-0.23	-16.32(.000)	-0.48	0.76
B	0.00	772	16.06	-0.24	-17.33(.000)	-0.11	0.89
C	1.00	2986	62.13	0.42	32.53(.000)	0.62	0.84
D	0.00	760	15.81	-0.16	-11.28(.000)	0.03	0.71

Item 15

```

-----
item:15 (r7q15)
Cases for this item  4805  Discrimination  0.51
Item Threshold(s):  -1.73  Weighted MNSQ  0.84
Item Delta(s):      -1.73

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.24(.001)	-1.62	0.18
9	0.00	13	0.27	-0.09	-6.26(.000)	-1.16	0.74
A	0.00	51	1.06	-0.12	-8.50(.000)	-0.66	0.82
B	1.00	4126	85.87	0.51	41.10(.000)	0.52	0.81
C	0.00	449	9.34	-0.42	-32.17(.000)	-0.75	0.64
D	0.00	164	3.41	-0.20	-14.44(.000)	-0.58	0.76

Item 16

```

-----
item:16 (r7q16)
Cases for this item  4804  Discrimination  0.55
Item Threshold(s):  0.12  Weighted MNSQ  0.88
Item Delta(s):      0.12
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.24(.001)	-1.62	0.18
9	0.00	11	0.23	-0.07	-4.86(.000)	-0.94	0.86
A	0.00	886	18.44	-0.24	-17.36(.000)	-0.11	0.72
B	1.00	2629	54.73	0.55	45.23(.000)	0.77	0.78
C	0.00	1078	22.44	-0.32	-23.68(.000)	-0.17	0.78
D	0.00	198	4.12	-0.19	-13.72(.000)	-0.41	0.82

Item 17

```

-----
item:17 (r7q17)
Cases for this item  4804  Discrimination  0.57
Item Threshold(s):  -0.63  Weighted MNSQ  0.85
Item Delta(s):      -0.63
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.08	-0.03	-2.05(.040)	-0.64	1.23
9	0.00	22	0.46	-0.06	-3.82(.000)	-0.38	0.69
A	0.00	260	5.41	-0.24	-17.34(.000)	-0.47	0.71
B	0.00	936	19.48	-0.36	-27.11(.000)	-0.27	0.71
C	0.00	237	4.93	-0.27	-19.36(.000)	-0.69	0.76
D	1.00	3345	69.63	0.57	48.06(.000)	0.66	0.79

Item 18

```

-----
item:18 (r7q18)
Cases for this item  4802  Discrimination  0.34
Item Threshold(s):  0.83  Weighted MNSQ  1.06
Item Delta(s):      0.83
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.05	-3.47(.001)	-1.40	0.40
9	0.00	23	0.48	-0.05	-3.24(.001)	-0.26	0.93
A	0.00	278	5.79	-0.31	-22.31(.000)	-0.69	0.72
B	0.00	1742	36.28	0.03	2.09(.037)	0.37	0.85
C	1.00	1912	39.82	0.34	24.75(.000)	0.69	0.83
D	0.00	844	17.58	-0.27	-19.49(.000)	-0.14	0.74

Item 19

```

-----
item:19 (r7q19)
Cases for this item  4802  Discrimination  0.54
Item Threshold(s):  -0.63  Weighted MNSQ  0.88
Item Delta(s):      -0.63
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.03	-1.97(.049)	-0.63	0.75
9	0.00	25	0.52	-0.04	-2.93(.003)	-0.18	0.62
A	0.00	473	9.85	-0.30	-22.00(.000)	-0.45	0.70
B	0.00	499	10.39	-0.29	-20.98(.000)	-0.37	0.73
C	0.00	460	9.58	-0.23	-16.23(.000)	-0.23	0.79
D	1.00	3342	69.60	0.54	44.72(.000)	0.65	0.80

Item 20

```

-----
item:20 (r7q20)
Cases for this item  4802  Discrimination  0.57
Item Threshold(s):  -0.02  Weighted MNSQ  0.86
Item Delta(s):      -0.02
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.25(.001)	-1.62	0.18
9	0.00	95	1.98	-0.06	-4.01(.000)	-0.02	0.76
A	0.00	479	9.98	-0.33	-24.53(.000)	-0.48	0.74
B	0.00	1292	26.91	-0.32	-23.44(.000)	-0.09	0.74
C	0.00	164	3.42	-0.17	-12.17(.000)	-0.46	0.78
D	1.00	2770	57.68	0.57	48.30(.000)	0.75	0.78

Item 21

```

-----
item:21 (r7q21)
Cases for this item  4801  Discrimination  0.44
Item Threshold(s):  -0.45  Weighted MNSQ  0.97
Item Delta(s):      -0.44
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.04	-2.59(.010)	-1.75	0.00
9	0.00	16	0.33	-0.04	-2.80(.005)	-0.41	1.04
A	0.00	653	13.60	-0.22	-15.94(.000)	-0.13	0.79
B	0.00	453	9.44	-0.20	-14.21(.000)	-0.18	0.83
C	1.00	3178	66.19	0.44	33.65(.000)	0.61	0.84
D	0.00	500	10.41	-0.22	-15.88(.000)	-0.22	0.80

Item 22

```

-----
item:22 (r7q22)
Cases for this item  4798  Discrimination  0.35
Item Threshold(s):  -0.06  Weighted MNSQ  1.05
Item Delta(s):      -0.06
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.04	-2.59(.010)	-1.75	0.00
9	0.00	8	0.17	-0.03	-2.13(.033)	-0.33	0.59
A	0.00	345	7.19	-0.28	-20.20(.000)	-0.52	0.78
B	0.00	989	20.61	-0.11	-7.48(.000)	0.17	0.89
C	0.00	645	13.44	-0.16	-10.88(.000)	0.02	0.84
D	1.00	2810	58.57	0.35	25.56(.000)	0.59	0.83

Item 23

```

-----
item:23 (r7q23)
Cases for this item  4798  Discrimination  0.53
Item Threshold(s):  -0.19  Weighted MNSQ  0.89
Item Delta(s):      -0.19
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.08	-0.04	-3.06(.002)	-0.95	0.67
9	0.00	12	0.25	-0.05	-3.16(.002)	-0.41	0.70
A	0.00	833	17.36	-0.33	-24.50(.000)	-0.26	0.73
B	1.00	2932	61.11	0.53	43.71(.000)	0.70	0.80
C	0.00	391	8.15	-0.23	-16.71(.000)	-0.32	0.82
D	0.00	626	13.05	-0.20	-13.87(.000)	-0.07	0.76

Item 24

```

-----
item:24 (r7q24)
Cases for this item  4798  Discrimination  0.41
Item Threshold(s):  -0.24  Weighted MNSQ  1.00
Item Delta(s):      -0.24

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
9	0.00	12	0.25	-0.03	-2.27(.023)	-0.20	0.94
A	1.00	2986	62.23	0.41	31.05(.000)	0.61	0.82
B	0.00	1152	24.01	-0.18	-12.58(.000)	0.08	0.85
C	0.00	324	6.75	-0.24	-17.00(.000)	-0.39	0.79
D	0.00	324	6.75	-0.24	-17.21(.000)	-0.40	0.86

Item 25

```

-----
item:25 (r7q25)
Cases for this item  4797  Discrimination  0.23
Item Threshold(s):  -0.13  Weighted MNSQ  1.16
Item Delta(s):      -0.13

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
8	0.00	2	0.04	-0.02	-1.58(.114)	-0.49	1.78
9	0.00	12	0.25	-0.04	-2.58(.010)	-0.27	1.06
A	0.00	1289	26.87	-0.05	-3.50(.000)	0.27	0.83
B	0.00	202	4.21	-0.27	-19.06(.000)	-0.70	0.76
C	1.00	2879	60.02	0.23	16.31(.000)	0.50	0.88
D	0.00	413	8.61	-0.12	-8.52(.000)	0.00	0.86

Item 26

```

-----
item:26 (r7q26)
Cases for this item  4795  Discrimination  0.44
Item Threshold(s):  -1.14  Weighted MNSQ  0.93
Item Delta(s):      -1.14

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
9	0.00	13	0.27	-0.04	-3.11(.002)	-0.40	1.05
A	0.00	326	6.80	-0.30	-21.53(.000)	-0.59	0.85
B	0.00	505	10.53	-0.21	-14.55(.000)	-0.17	0.77
C	1.00	3751	78.23	0.44	33.87(.000)	0.54	0.82
D	0.00	200	4.17	-0.21	-14.56(.000)	-0.50	0.73

Item 27

```

-----
item:27 (r7q27)
Cases for this item  4794  Discrimination  0.49
Item Threshold(s):   1.41  Weighted MNSQ  0.90
Item Delta(s):       1.41

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
0	0.00	2858	59.62	-0.27	-19.79(.000)	0.15	0.81
1	1.00	1374	28.66	0.49	38.78(.000)	1.01	0.76
9	0.00	562	11.72	-0.27	-19.23(.000)	-0.27	0.77

Item 28

```

-----
item:28 (r7q28)
Cases for this item  4789  Discrimination  0.14
Item Threshold(s):  1.81  Weighted MNSQ  1.14
Item Delta(s):      1.81
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.03	-2.04(.041)	-0.60	1.03
9	0.00	14	0.29	-0.05	-3.42(.001)	-0.49	0.87
A	0.00	253	5.28	-0.16	-11.06(.000)	-0.25	0.97
B	0.00	2127	44.41	-0.07	-5.15(.000)	0.27	0.83
C	0.00	1337	27.92	0.04	2.70(.007)	0.42	0.93
D	1.00	1055	22.03	0.14	9.80(.000)	0.57	0.91

Item 29

```

-----
item:29 (r7q29)
Cases for this item  4788  Discrimination  0.52
Item Threshold(s):  0.20  Weighted MNSQ  0.91
Item Delta(s):      0.21
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.08	-0.04	-3.01(.003)	-0.91	0.65
9	0.00	15	0.31	-0.03	-1.97(.048)	-0.07	0.86
A	0.00	1118	23.35	-0.33	-24.23(.000)	-0.17	0.74
B	0.00	732	15.29	-0.11	-7.40(.000)	0.14	0.79
C	0.00	381	7.96	-0.29	-21.09(.000)	-0.48	0.72
D	1.00	2538	53.01	0.52	42.19(.000)	0.76	0.79

Item 30

```

-----
item:30 (r7q30)
Cases for this item  4787  Discrimination  0.30
Item Threshold(s):  0.84  Weighted MNSQ  1.08
Item Delta(s):      0.83
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.03	-2.32(.021)	-0.95	1.31
9	0.00	18	0.38	-0.05	-3.41(.001)	-0.24	0.64
A	0.00	752	15.71	-0.06	-4.10(.000)	0.20	0.88
B	1.00	1905	39.80	0.30	21.85(.000)	0.67	0.91
C	0.00	1979	41.34	-0.17	-11.89(.000)	0.18	0.78
D	0.00	130	2.72	-0.24	-16.92(.000)	-0.83	0.69

Item 31

```

-----
item:31 (r7q31)
Cases for this item  4787  Discrimination  0.23
Item Threshold(s):  0.39  Weighted MNSQ  1.15
Item Delta(s):      0.39
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.59(.556)	-0.21	0.00
9	0.00	36	0.75	-0.03	-1.97(.049)	0.07	0.74
A	0.00	848	17.71	-0.14	-9.91(.000)	0.09	0.98
B	0.00	669	13.98	-0.06	-3.99(.000)	0.23	0.94
C	1.00	2348	49.05	0.23	16.70(.000)	0.55	0.86
D	0.00	885	18.49	-0.10	-7.27(.000)	0.15	0.80

Item 32

```

-----
item:32 (r7q32)
Cases for this item  4787  Discrimination  0.42
Item Threshold(s):  -0.57  Weighted MNSQ  0.97
Item Delta(s):      -0.57

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.59(.556)	-0.21	0.00
9	0.00	17	0.36	-0.05	-3.13(.002)	-0.35	0.83
A	1.00	3290	68.73	0.42	32.46(.000)	0.59	0.83
B	0.00	488	10.19	-0.19	-13.14(.000)	-0.13	0.87
C	0.00	761	15.90	-0.20	-14.16(.000)	-0.03	0.79
D	0.00	230	4.80	-0.30	-21.81(.000)	-0.76	0.70

Item 33

```

-----
item:33 (r7q33)
Cases for this item  4779  Discrimination  0.37
Item Threshold(s):   1.32  Weighted MNSQ  0.99
Item Delta(s):       1.32

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	0.00	0.24(.812)	0.62	0.00
9	0.00	39	0.82	-0.06	-3.94(.000)	-0.10	0.80
A	0.00	882	18.46	-0.11	-7.30(.000)	0.17	0.88
B	1.00	1446	30.26	0.37	27.36(.000)	0.82	0.91
C	0.00	1148	24.02	-0.14	-10.11(.000)	0.12	0.79
D	0.00	1263	26.43	-0.14	-9.72(.000)	0.16	0.80

Item 34

```

-----
item:34 (r7q34)
Cases for this item  4778  Discrimination  0.40
Item Threshold(s):   0.47  Weighted MNSQ  1.01
Item Delta(s):       0.47

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.59(.555)	-0.21	0.00
9	0.00	23	0.48	-0.04	-2.78(.005)	-0.06	0.85
A	0.00	258	5.40	-0.18	-12.77(.000)	-0.30	0.89
B	0.00	413	8.64	-0.21	-15.18(.000)	-0.24	0.83
C	0.00	1812	37.92	-0.20	-14.12(.000)	0.13	0.83
D	1.00	2271	47.53	0.40	30.45(.000)	0.71	0.81

Item 35

```

-----
item:35 (r7q35)
Cases for this item  4778  Discrimination  0.46
Item Threshold(s):  -1.07  Weighted MNSQ  0.92
Item Delta(s):      -1.07

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.02	-1.42(.155)	-0.25	2.04
9	0.00	17	0.36	-0.05	-3.51(.000)	-0.36	0.65
A	0.00	223	4.67	-0.22	-15.63(.000)	-0.51	0.77
B	0.00	291	6.09	-0.25	-17.85(.000)	-0.49	0.82
C	1.00	3689	77.21	0.46	35.52(.000)	0.55	0.82
D	0.00	556	11.64	-0.26	-18.27(.000)	-0.21	0.80

Item 36

item:36 (r7q36)Cases for this item 4777 Discrimination 0.23
Item Threshold(s): 0.78 Weighted MNSQ 1.14
Item Delta(s): 0.78

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.08	-0.01	-0.47(.636)	0.28	1.57
9	0.00	30	0.63	-0.05	-3.29(.001)	-0.06	0.79
A	0.00	1344	28.13	-0.04	-2.68(.007)	0.29	0.81
B	0.00	800	16.75	-0.18	-12.66(.000)	0.01	0.82
C	1.00	1951	40.84	0.23	16.17(.000)	0.58	0.95
D	0.00	648	13.56	-0.07	-4.72(.000)	0.22	0.85

Item 37

item:37 (r7q37)Cases for this item 4775 Discrimination 0.29
Item Threshold(s): -0.02 Weighted MNSQ 1.10
Item Delta(s): -0.02

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.10	-0.02	-1.11(.266)	-0.12	1.00
9	0.00	9	0.19	-0.05	-3.63(.000)	-0.63	0.91
A	0.00	1557	32.61	-0.18	-12.58(.000)	0.13	0.82
B	1.00	2757	57.74	0.29	21.28(.000)	0.56	0.87
C	0.00	88	1.84	-0.17	-12.07(.000)	-0.71	0.75
D	0.00	359	7.52	-0.13	-9.39(.000)	-0.02	0.94

Item 38

item:38 (r7q38)Cases for this item 4775 Discrimination 0.25
Item Threshold(s): 1.92 Weighted MNSQ 1.04
Item Delta(s): 1.92

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.01	-0.84(.403)	-0.05	0.23
9	0.00	25	0.52	-0.04	-2.56(.010)	-0.10	0.89
A	1.00	975	20.42	0.25	17.76(.000)	0.78	0.99
B	0.00	1729	36.21	-0.03	-2.15(.031)	0.32	0.92
C	0.00	685	14.35	-0.26	-18.73(.000)	-0.15	0.75
D	0.00	1359	28.46	0.02	1.42(.155)	0.34	0.72

Item 39

item:39 (r7q39)Cases for this item 4767 Discrimination 0.41
Item Threshold(s): 0.09 Weighted MNSQ 1.00
Item Delta(s): 0.08

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	30	0.63	-0.06	-3.86(.000)	-0.18	0.71
A	1.00	2654	55.67	0.41	30.61(.000)	0.65	0.83
B	0.00	518	10.87	-0.20	-14.44(.000)	-0.13	0.86
C	0.00	715	15.00	-0.27	-19.53(.000)	-0.20	0.76
D	0.00	850	17.83	-0.09	-6.53(.000)	0.17	0.85

Item 40

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-----
item:40 (r7q40)
Cases for this item  4767  Discrimination  0.40
Item Threshold(s):  1.19  Weighted MNSQ  0.97
Item Delta(s):      1.19
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	31	0.65	-0.03	-2.36(.018)	0.01	0.74
A	0.00	1617	33.92	-0.10	-6.85(.000)	0.23	0.77
B	0.00	725	15.21	-0.14	-9.75(.000)	0.08	0.87
C	1.00	1563	32.79	0.40	29.79(.000)	0.84	0.91
D	0.00	831	17.43	-0.23	-16.12(.000)	-0.07	0.74

Item 41

```

-----
item:41 (r7q41)
Cases for this item  4765  Discrimination  0.21
Item Threshold(s):  1.64  Weighted MNSQ  1.09
Item Delta(s):      1.64
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.08	-0.00	-0.24(.812)	0.11	1.27
9	0.00	45	0.94	-0.02	-1.08(.282)	0.25	0.85
A	1.00	1178	24.72	0.21	14.82(.000)	0.67	0.98
B	0.00	1167	24.49	-0.00	-0.26(.793)	0.34	0.86
C	0.00	869	18.24	-0.13	-8.99(.000)	0.11	0.86
D	0.00	1502	31.52	-0.08	-5.58(.000)	0.26	0.82

Item 42

```

-----
item:42 (r7q42)
Cases for this item  4760  Discrimination  0.39
Item Threshold(s):  1.02  Weighted MNSQ  0.99
Item Delta(s):      1.01
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.02	-0.01	-0.95(.343)	-0.43	0.00
9	0.00	36	0.76	-0.04	-3.01(.003)	-0.04	0.61
A	0.00	899	18.89	-0.09	-6.52(.000)	0.18	0.84
B	0.00	1411	29.64	-0.13	-9.17(.000)	0.18	0.82
C	0.00	687	14.43	-0.25	-17.78(.000)	-0.13	0.73
D	1.00	1726	36.26	0.39	29.43(.000)	0.79	0.88

Item 43

```

-----
item:43 (r7q43)
Cases for this item  4758  Discrimination  0.45
Item Threshold(s):  0.20  Weighted MNSQ  0.97
Item Delta(s):      0.21
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.04	-2.51(.012)	-1.20	1.09
9	0.00	69	1.45	-0.04	-2.42(.015)	0.10	0.69
A	0.00	400	8.41	-0.24	-16.94(.000)	-0.32	0.78
B	0.00	851	17.89	-0.22	-15.75(.000)	-0.04	0.79
C	1.00	2528	53.13	0.45	34.73(.000)	0.71	0.85
D	0.00	908	19.08	-0.17	-12.11(.000)	0.05	0.74

Item 44

```

-----
item:44 (r7q44)
Cases for this item  4755  Discrimination  0.35
Item Threshold(s):  0.93  Weighted MNSQ  1.02
Item Delta(s):      0.93

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.01	-0.51(.613)	0.01	0.63
9	0.00	23	0.48	-0.02	-1.45(.146)	0.19	0.80
A	1.00	1804	37.94	0.35	25.97(.000)	0.74	0.91
B	0.00	1293	27.19	-0.02	-1.52(.129)	0.30	0.79
C	0.00	823	17.31	-0.19	-13.38(.000)	0.01	0.80
D	0.00	810	17.03	-0.23	-16.51(.000)	-0.08	0.79

Item 45

```

-----
item:45 (r7q45)
Cases for this item  4752  Discrimination  0.33
Item Threshold(s):  1.16  Weighted MNSQ  1.03
Item Delta(s):      1.16

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.04	-2.68(.007)	-1.19	0.79
9	0.00	19	0.40	-0.03	-1.81(.071)	-0.03	0.88
A	0.00	1418	29.84	-0.22	-15.46(.000)	0.06	0.80
B	0.00	992	20.88	-0.06	-3.94(.000)	0.26	0.88
C	1.00	1587	33.40	0.33	24.35(.000)	0.76	0.92
D	0.00	734	15.45	-0.09	-6.00(.000)	0.17	0.72

Item 46

```

-----
item:46 (r7q46)
Cases for this item  4747  Discrimination  0.29
Item Threshold(s):  1.24  Weighted MNSQ  1.07
Item Delta(s):      1.25

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	22	0.46	-0.06	-3.83(.000)	-0.30	0.89
A	0.00	1068	22.50	0.09	6.16(.000)	0.48	0.91
B	0.00	1402	29.53	-0.23	-16.05(.000)	0.06	0.76
C	0.00	746	15.72	-0.18	-12.31(.000)	0.01	0.88
D	1.00	1509	31.79	0.29	20.72(.000)	0.71	0.87

Item 47

```

-----
item:47 (r7q47)
Cases for this item  4744  Discrimination  0.50
Item Threshold(s):  -0.11  Weighted MNSQ  0.92
Item Delta(s):      -0.11

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.04	-0.05	-3.19(.001)	-1.37	0.54
9	0.00	29	0.61	-0.03	-2.14(.033)	0.10	0.68
A	1.00	2838	59.82	0.50	40.06(.000)	0.70	0.82
B	0.00	526	11.09	-0.26	-18.57(.000)	-0.26	0.81
C	0.00	612	12.90	-0.25	-17.52(.000)	-0.18	0.74
D	0.00	737	15.54	-0.22	-15.34(.000)	-0.08	0.74

Item 48

```

-----
item:48 (r7q48)
Cases for this item  4741  Discrimination  0.30
Item Threshold(s):  1.31  Weighted MNSQ  1.04
Item Delta(s):      1.32
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.08	-0.03	-1.90(.057)	-0.20	1.21
9	0.00	16	0.34	-0.03	-2.22(.027)	-0.04	0.66
A	0.00	746	15.74	-0.23	-15.97(.000)	-0.08	0.77
B	0.00	1686	35.56	0.02	1.17(.243)	0.36	0.82
C	1.00	1446	30.50	0.30	21.46(.000)	0.75	0.95
D	0.00	843	17.78	-0.16	-10.97(.000)	0.05	0.78

Item 49

```

-----
item:49 (r7q49)
Cases for this item  4739  Discrimination  0.40
Item Threshold(s):  0.20  Weighted MNSQ  1.01
Item Delta(s):      0.20
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	58	1.22	-0.06	-4.47(.000)	-0.19	0.81
A	0.00	1020	21.52	-0.14	-9.92(.000)	0.12	0.81
B	1.00	2525	53.28	0.40	29.68(.000)	0.67	0.87
C	0.00	477	10.07	-0.25	-18.04(.000)	-0.27	0.79
D	0.00	659	13.91	-0.16	-11.19(.000)	0.03	0.73

Item 50

```

-----
item:50 (r7q50)
Cases for this item  4688  Discrimination  0.13
Item Threshold(s):  1.45  Weighted MNSQ  1.18
Item Delta(s):      1.45
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.06	-0.00	-0.29(.770)	0.32	0.76
9	0.00	4	0.09	0.00	0.04(.970)	0.15	0.36
A	0.00	2611	55.70	0.20	13.97(.000)	0.51	0.80
B	1.00	1320	28.16	0.13	8.98(.000)	0.53	0.94
C	0.00	395	8.43	-0.34	-24.57(.000)	-0.55	0.63
D	0.00	355	7.57	-0.24	-17.04(.000)	-0.36	0.71

```

-----
The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 0.66% of the data are missing.
-----

```

```

The following results are scaled to assume that a single response
was provided for each item.
-----

```

```

N                4819
Mean              27.89
Standard Deviation  8.55
Variance          73.02
Skewness         -0.20
Kurtosis         -0.49
Standard error of mean  0.12
Standard error of measurement  3.03
Coefficient Alpha  0.87
-----

```

Appendix B.12 Year 7 Spelling

=====

NAPLAN 2013, Calibration, Grade 7, Spelling
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (lc7q01)
Cases for this item 4839 Discrimination 0.51
Item Threshold(s): -2.58 Weighted MNSQ 1.04
Item Delta(s): -2.58

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	802	16.57	-0.50	-40.10(.000)	-2.29	1.73
1	1.00	4013	82.93	0.51	41.25(.000)	0.26	1.62
9	0.00	24	0.50	-0.09	-6.15(.000)	-2.68	1.87

=====

Item 2

item:2 (lc7q02)
Cases for this item 4839 Discrimination 0.57
Item Threshold(s): -2.55 Weighted MNSQ 0.86
Item Delta(s): -2.55

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	786	16.24	-0.55	-45.64(.000)	-2.57	1.58
1	1.00	4000	82.66	0.57	48.82(.000)	0.33	1.53
9	0.00	53	1.10	-0.15	-10.22(.000)	-3.15	1.32

=====

Item 3

item:3 (lc7q03)
Cases for this item 4834 Discrimination 0.59
Item Threshold(s): -2.17 Weighted MNSQ 0.91
Item Delta(s): -2.17

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	980	20.27	-0.57	-48.36(.000)	-2.28	1.64
1	1.00	3815	78.92	0.59	50.70(.000)	0.40	1.52
9	0.00	39	0.81	-0.12	-8.42(.000)	-3.15	1.56

=====

Item 4

item:4 (lc7q04)
Cases for this item 4831 Discrimination 0.60
Item Threshold(s): -2.23 Weighted MNSQ 0.86
Item Delta(s): -2.23

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	912	18.88	-0.57	-47.89(.000)	-2.40	1.62
1	1.00	3842	79.53	0.60	52.32(.000)	0.41	1.49
9	0.00	77	1.59	-0.16	-11.62(.000)	-2.77	1.27

=====

Item 5

```

-----
item:5 (lc7q05)
Cases for this item  4823  Discrimination  0.56
Item Threshold(s):  -2.11  Weighted MNSQ  0.99
Item Delta(s):      -2.11
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1008	20.90	-0.54	-44.34(.000)	-2.12	1.69
1	1.00	3777	78.31	0.56	46.89(.000)	0.39	1.54
9	0.00	38	0.79	-0.13	-9.36(.000)	-3.41	1.38

Item 6

```

-----
item:6 (lc7q06)
Cases for this item  4819  Discrimination  0.57
Item Threshold(s):  -0.95  Weighted MNSQ  1.08
Item Delta(s):      -0.95
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1691	35.09	-0.54	-44.28(.000)	-1.48	1.71
1	1.00	3051	63.31	0.57	48.49(.000)	0.63	1.49
9	0.00	77	1.60	-0.15	-10.82(.000)	-2.64	1.61

Item 7

```

-----
item:7 (lc7q07)
Cases for this item  4815  Discrimination  0.50
Item Threshold(s):  -1.25  Weighted MNSQ  1.18
Item Delta(s):      -1.25
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1159	24.07	-0.41	-30.97(.000)	-1.54	1.94
1	1.00	3260	67.71	0.50	39.97(.000)	0.49	1.52
9	0.00	396	8.22	-0.22	-15.29(.000)	-1.45	1.64

Item 8

```

-----
item:8 (lc7q08)
Cases for this item  4812  Discrimination  0.53
Item Threshold(s):  -0.17  Weighted MNSQ  1.17
Item Delta(s):      -0.18
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2280	47.38	-0.50	-39.72(.000)	-1.08	1.78
1	1.00	2471	51.35	0.53	42.82(.000)	0.76	1.47
9	0.00	61	1.27	-0.13	-9.02(.000)	-2.60	1.77

Item 9

```

-----
item:9 (lc7q09)
Cases for this item  4811  Discrimination  0.55
Item Threshold(s):  -0.20  Weighted MNSQ  1.13
Item Delta(s):      -0.19
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2204	45.81	-0.50	-40.16(.000)	-1.11	1.67
1	1.00	2486	51.67	0.55	46.01(.000)	0.79	1.53
9	0.00	121	2.52	-0.17	-11.95(.000)	-2.31	1.83

Item 10

```

-----
item:10 (lc7q10)
Cases for this item  4806  Discrimination  0.66
Item Threshold(s):  -0.02  Weighted MNSQ  0.90
Item Delta(s):      -0.01

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2304	47.94	-0.59	-51.27(.000)	-1.21	1.59
1	1.00	2346	48.81	0.66	61.12(.000)	1.02	1.36
9	0.00	156	3.25	-0.19	-13.34(.000)	-2.24	1.68

Item 11

```

-----
item:11 (lc7q11)
Cases for this item  4803  Discrimination  0.55
Item Threshold(s):  0.76  Weighted MNSQ  1.07
Item Delta(s):      0.76

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2944	61.30	-0.49	-39.34(.000)	-0.82	1.68
1	1.00	1753	36.50	0.55	45.84(.000)	1.12	1.42
9	0.00	106	2.21	-0.17	-12.04(.000)	-2.52	1.81

Item 12

```

-----
item:12 (lc7q12)
Cases for this item  4801  Discrimination  0.55
Item Threshold(s):  0.46  Weighted MNSQ  1.09
Item Delta(s):      0.46

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2643	55.05	-0.48	-37.41(.000)	-0.91	1.65
1	1.00	1977	41.18	0.55	45.31(.000)	1.02	1.51
9	0.00	181	3.77	-0.17	-12.20(.000)	-1.85	1.75

Item 13

```

-----
item:13 (lc7q13)
Cases for this item  4800  Discrimination  0.57
Item Threshold(s):  0.91  Weighted MNSQ  1.01
Item Delta(s):      0.91

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3023	62.98	-0.51	-40.59(.000)	-0.81	1.65
1	1.00	1642	34.21	0.57	48.15(.000)	1.23	1.43
9	0.00	135	2.81	-0.16	-11.31(.000)	-2.10	1.94

Item 14

```

-----
item:14 (lc7q14)
Cases for this item  4798  Discrimination  0.52
Item Threshold(s):  1.58  Weighted MNSQ  1.03
Item Delta(s):      1.58

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3338	69.57	-0.40	-30.08(.000)	-0.60	1.68
1	1.00	1190	24.80	0.52	41.80(.000)	1.44	1.44
9	0.00	270	5.63	-0.17	-12.16(.000)	-1.54	1.79

Item 15

```

-----
item:15 (lc7q15)
Cases for this item  4797  Discrimination  0.53
Item Threshold(s):  2.10  Weighted MNSQ  0.91
Item Delta(s):      2.10
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3591	74.86	-0.34	-24.85(.000)	-0.49	1.63
1	1.00	892	18.59	0.53	43.05(.000)	1.82	1.36
9	0.00	314	6.55	-0.24	-16.97(.000)	-1.87	1.71

Item 16

```

-----
item:16 (lc7q16)
Cases for this item  4797  Discrimination  0.46
Item Threshold(s):  2.39  Weighted MNSQ  0.99
Item Delta(s):      2.39
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3926	81.84	-0.37	-27.89(.000)	-0.45	1.70
1	1.00	751	15.66	0.46	35.92(.000)	1.77	1.48
9	0.00	120	2.50	-0.15	-10.45(.000)	-2.09	1.84

Item 17

```

-----
item:17 (lc7q17)
Cases for this item  4794  Discrimination  0.62
Item Threshold(s):  -1.83  Weighted MNSQ  0.88
Item Delta(s):      -1.83
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1082	22.57	-0.57	-47.88(.000)	-2.05	1.56
1	1.00	3621	75.53	0.62	54.37(.000)	0.50	1.47
9	0.00	91	1.90	-0.20	-14.37(.000)	-3.12	1.56

Item 18

```

-----
item:18 (lc7q18)
Cases for this item  4767  Discrimination  0.64
Item Threshold(s):  -0.20  Weighted MNSQ  0.95
Item Delta(s):      -0.20
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1915	40.17	-0.54	-44.19(.000)	-1.26	1.60
1	1.00	2488	52.19	0.64	57.16(.000)	0.94	1.39
9	0.00	364	7.64	-0.20	-14.41(.000)	-1.41	1.62

Item 19

```

-----
item:19 (lc7q19)
Cases for this item  4757  Discrimination  0.64
Item Threshold(s):  -1.46  Weighted MNSQ  0.88
Item Delta(s):      -1.46
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1279	26.89	-0.60	-51.46(.000)	-1.86	1.54
1	1.00	3391	71.28	0.64	57.25(.000)	0.60	1.43
9	0.00	87	1.83	-0.18	-12.47(.000)	-2.74	1.66

Item 20

```

-----
item:20 (lc7q20)
Cases for this item  4742  Discrimination  0.66
Item Threshold(s):  -0.61  Weighted MNSQ  0.91
Item Delta(s):      -0.61

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1854	39.10	-0.61	-52.92(.000)	-1.42	1.54
1	1.00	2795	58.94	0.66	59.75(.000)	0.85	1.37
9	0.00	93	1.96	-0.18	-12.65(.000)	-2.69	1.53

Item 21

```

-----
item:21 (lc7q21)
Cases for this item  4725  Discrimination  0.60
Item Threshold(s):  -0.09  Weighted MNSQ  1.01
Item Delta(s):      -0.08

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2089	44.21	-0.53	-43.17(.000)	-1.12	1.62
1	1.00	2393	50.65	0.60	52.02(.000)	0.92	1.43
9	0.00	243	5.14	-0.17	-11.87(.000)	-1.40	1.64

Item 22

```

-----
item:22 (lc7q22)
Cases for this item  4712  Discrimination  0.63
Item Threshold(s):   0.25  Weighted MNSQ  0.95
Item Delta(s):       0.25

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2323	49.30	-0.53	-43.10(.000)	-1.00	1.59
1	1.00	2137	45.35	0.63	55.75(.000)	1.09	1.35
9	0.00	252	5.35	-0.21	-14.98(.000)	-1.75	1.55

Item 23

```

-----
item:23 (lc7q23)
Cases for this item  4704  Discrimination  0.67
Item Threshold(s):  -0.09  Weighted MNSQ  0.89
Item Delta(s):      -0.09

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2051	43.60	-0.58	-48.20(.000)	-1.21	1.54
1	1.00	2395	50.91	0.67	61.24(.000)	1.04	1.34
9	0.00	258	5.48	-0.21	-14.74(.000)	-1.63	1.45

Item 24

```

-----
item:24 (lc7q24)
Cases for this item  4691  Discrimination  0.62
Item Threshold(s):   0.84  Weighted MNSQ  0.93
Item Delta(s):       0.84

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2736	58.32	-0.52	-41.61(.000)	-0.82	1.56
1	1.00	1687	35.96	0.62	53.84(.000)	1.32	1.35
9	0.00	268	5.71	-0.17	-12.16(.000)	-1.36	1.66

Item 25

```

-----
item:25 (lc7q25)
Cases for this item  4673  Discrimination  0.65
Item Threshold(s):  0.57  Weighted MNSQ  0.90
Item Delta(s):      0.57

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2582	55.25	-0.57	-47.90(.000)	-0.93	1.55
1	1.00	1888	40.40	0.65	57.79(.000)	1.25	1.33
9	0.00	203	4.34	-0.15	-10.68(.000)	-1.38	1.50

Item 26

```

-----
item:26 (lc7q26)
Cases for this item  4648  Discrimination  0.51
Item Threshold(s):  0.98  Weighted MNSQ  1.12
Item Delta(s):      0.99

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2692	57.92	-0.40	-29.68(.000)	-0.64	1.68
1	1.00	1580	33.99	0.51	39.94(.000)	1.15	1.46
9	0.00	376	8.09	-0.16	-10.72(.000)	-0.96	1.57

Item 27

```

-----
item:27 (lc7q27)
Cases for this item  4597  Discrimination  0.50
Item Threshold(s):  1.32  Weighted MNSQ  1.07
Item Delta(s):      1.32

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2882	62.69	-0.39	-28.96(.000)	-0.56	1.63
1	1.00	1345	29.26	0.50	39.16(.000)	1.29	1.52
9	0.00	370	8.05	-0.14	-9.45(.000)	-0.81	1.57

Item 28

```

-----
item:28 (lc7q28)
Cases for this item  4552  Discrimination  0.43
Item Threshold(s):  1.41  Weighted MNSQ  1.18
Item Delta(s):      1.41

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2957	64.96	-0.34	-24.39(.000)	-0.46	1.67
1	1.00	1280	28.12	0.43	32.28(.000)	1.18	1.57
9	0.00	315	6.92	-0.13	-8.52(.000)	-0.84	1.57

Item 29

```

-----
item:29 (lc7q29)
Cases for this item  4508  Discrimination  0.47
Item Threshold(s):  2.02  Weighted MNSQ  1.04
Item Delta(s):      2.02

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3337	74.02	-0.35	-25.08(.000)	-0.36	1.67
1	1.00	923	20.47	0.47	36.04(.000)	1.56	1.37
9	0.00	248	5.50	-0.16	-11.17(.000)	-1.13	1.46

Item 30

```

-----
item:30 (1c7q30)
Cases for this item  4392  Discrimination  0.44
Item Threshold(s):  2.88  Weighted MNSQ  0.94
Item Delta(s):      2.88
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3608	82.15	-0.34	-23.82(.000)	-0.26	1.66
1	1.00	539	12.27	0.44	32.15(.000)	2.08	1.41
9	0.00	245	5.58	-0.06	-3.96(.000)	-0.38	1.47

```

-----
The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 1.99% of the data are missing.
-----

```

The following results are scaled to assume that a single response was provided for each item.

```

N 4839
Mean 14.51
Standard Deviation 7.66
Variance 58.65
Skewness -0.08
Kurtosis -0.83
Standard error of mean 0.11
Standard error of measurement 2.14
Coefficient Alpha 0.92
-----

```

Appendix B.13 Year 9 G&P

=====

NAPLAN 2013, Calibration, Grade 9, GP
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (lc9q31)
Cases for this item 3852 Discrimination 0.31
Item Threshold(s): -2.65 Weighted MNSQ 0.94
Item Delta(s): -2.65

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	12	0.31	-0.08	-4.98(.000)	-0.48	0.86
9	0.00	6	0.16	-0.03	-1.80(.073)	-0.07	0.86
A	1.00	3692	95.85	0.31	20.32(.000)	0.94	0.91
B	0.00	44	1.14	-0.19	-12.23(.000)	-0.68	1.05
C	0.00	37	0.96	-0.13	-8.02(.000)	-0.34	0.87
D	0.00	61	1.58	-0.19	-11.87(.000)	-0.31	0.86

=====

Item 2

item:2 (lc9q32)
Cases for this item 3852 Discrimination 0.27
Item Threshold(s): -2.27 Weighted MNSQ 0.97
Item Delta(s): -2.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	6	0.16	-0.05	-3.12(.002)	-0.36	1.52
A	1.00	3628	94.18	0.27	17.58(.000)	0.94	0.92
B	0.00	30	0.78	-0.14	-8.63(.000)	-0.54	1.16
C	0.00	154	4.00	-0.19	-12.13(.000)	0.14	1.02
D	0.00	34	0.88	-0.13	-8.11(.000)	-0.37	0.84

=====

Item 3

item:3 (lc9q33)
Cases for this item 3851 Discrimination 0.39
Item Threshold(s): -1.72 Weighted MNSQ 0.93
Item Delta(s): -1.72

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.03	-1.96(.051)	-0.69	0.00
9	0.00	3	0.08	-0.02	-1.40(.162)	-0.18	1.15
A	0.00	239	6.21	-0.31	-20.28(.000)	-0.11	0.84
B	0.00	109	2.83	-0.19	-11.92(.000)	-0.07	0.95
C	0.00	9	0.23	-0.12	-7.43(.000)	-1.13	0.53
D	1.00	3490	90.63	0.39	26.13(.000)	0.99	0.90

=====

Item 4

```

-----
item:4 (lc9q34)
Cases for this item  3851  Discrimination  0.43
Item Threshold(s):  -1.41  Weighted MNSQ  0.92
Item Delta(s):      -1.40
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	13	0.34	-0.08	-4.97(.000)	-0.29	0.90
A	0.00	91	2.36	-0.15	-9.63(.000)	0.07	0.99
B	0.00	252	6.54	-0.33	-21.97(.000)	-0.15	0.83
C	1.00	3384	87.87	0.43	29.37(.000)	1.02	0.89
D	0.00	111	2.88	-0.17	-11.00(.000)	0.10	0.79

Item 5

```

-----
item:5 (lc9q35)
Cases for this item  3849  Discrimination  0.40
Item Threshold(s):  -1.53  Weighted MNSQ  0.93
Item Delta(s):      -1.53
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	16	0.42	-0.04	-2.40(.017)	0.51	0.73
9	0.00	12	0.31	-0.07	-4.19(.000)	-0.15	0.77
A	0.00	312	8.11	-0.34	-22.28(.000)	-0.05	0.83
B	0.00	28	0.73	-0.14	-8.98(.000)	-0.51	1.13
C	1.00	3429	89.09	0.40	27.45(.000)	1.01	0.89
D	0.00	52	1.35	-0.13	-8.39(.000)	-0.11	0.92

Item 6

```

-----
item:6 (lc9q36)
Cases for this item  3849  Discrimination  0.39
Item Threshold(s):  -1.34  Weighted MNSQ  0.96
Item Delta(s):      -1.33
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	30	0.78	-0.11	-6.80(.000)	-0.15	0.86
A	1.00	3357	87.22	0.39	26.10(.000)	1.01	0.90
B	0.00	295	7.66	-0.26	-16.44(.000)	0.13	0.80
C	0.00	106	2.75	-0.20	-12.34(.000)	-0.05	0.92
D	0.00	61	1.58	-0.16	-9.99(.000)	-0.18	0.77

Item 7

```

-----
item:7 (lc9q37)
Cases for this item  3848  Discrimination  0.40
Item Threshold(s):  -1.28  Weighted MNSQ  0.94
Item Delta(s):      -1.28
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.13	-0.07	-4.39(.000)	-0.78	1.25
9	0.00	11	0.29	-0.07	-4.63(.000)	-0.16	0.96
A	0.00	189	4.91	-0.26	-16.92(.000)	-0.02	0.82
B	0.00	262	6.81	-0.22	-13.66(.000)	0.22	0.89
C	0.00	45	1.17	-0.17	-10.95(.000)	-0.38	0.95
D	1.00	3336	86.69	0.40	27.17(.000)	1.02	0.89

Item 8

```

-----
item:8 (lc9q38)
Cases for this item  3848  Discrimination  0.39
Item Threshold(s):  -1.23  Weighted MNSQ  0.96
Item Delta(s):      -1.23
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	12	0.31	-0.07	-4.49(.000)	-0.40	0.98
A	0.00	129	3.35	-0.20	-12.97(.000)	0.03	0.82
B	0.00	144	3.74	-0.25	-16.03(.000)	-0.18	0.78
C	1.00	3313	86.10	0.39	26.22(.000)	1.02	0.90
D	0.00	250	6.50	-0.19	-11.88(.000)	0.30	0.92

Item 9

```

-----
item:9 (lc9q39)
Cases for this item  3846  Discrimination  0.40
Item Threshold(s):  -0.27  Weighted MNSQ  1.02
Item Delta(s):      -0.27
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	27	0.70	-0.08	-4.80(.000)	0.26	1.25
A	0.00	90	2.34	-0.18	-11.56(.000)	-0.03	0.86
B	0.00	790	20.54	-0.28	-18.23(.000)	0.41	0.84
C	1.00	2796	72.70	0.40	26.82(.000)	1.09	0.90
D	0.00	143	3.72	-0.15	-9.53(.000)	0.28	0.97

Item 10

```

-----
item:10 (lc9q40)
Cases for this item  3846  Discrimination  0.47
Item Threshold(s):  -0.17  Weighted MNSQ  0.96
Item Delta(s):      -0.18
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.10	-0.07	-4.04(.000)	-0.95	0.55
9	0.00	15	0.39	-0.04	-2.65(.008)	0.48	1.29
A	0.00	334	8.68	-0.21	-13.11(.000)	0.30	0.79
B	1.00	2736	71.14	0.47	33.26(.000)	1.14	0.89
C	0.00	89	2.31	-0.24	-15.46(.000)	-0.42	0.93
D	0.00	668	17.37	-0.30	-19.72(.000)	0.35	0.73

Item 11

```

-----
item:11 (lc9q41)
Cases for this item  3846  Discrimination  0.40
Item Threshold(s):  -0.86  Weighted MNSQ  0.98
Item Delta(s):      -0.86
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.02	-1.53(.126)	-0.55	0.00
9	0.00	21	0.55	-0.11	-7.07(.000)	-0.31	0.82
A	0.00	302	7.85	-0.23	-14.77(.000)	0.23	0.81
B	0.00	170	4.42	-0.19	-12.12(.000)	0.13	0.91
C	1.00	3144	81.75	0.40	27.14(.000)	1.05	0.90
D	0.00	208	5.41	-0.20	-12.39(.000)	0.22	0.82

Item 12

```

-----
item:12 (lc9q42)
Cases for this item  3843  Discrimination  0.51
Item Threshold(s):  -0.15  Weighted MNSQ  0.93
Item Delta(s):      -0.15

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	23	0.60	-0.09	-5.75(.000)	-0.01	0.83
A	0.00	265	6.90	-0.18	-11.06(.000)	0.35	0.87
B	0.00	381	9.91	-0.27	-17.59(.000)	0.21	0.73
C	1.00	2718	70.73	0.51	36.32(.000)	1.16	0.88
D	0.00	456	11.87	-0.30	-19.45(.000)	0.21	0.78

Item 13

```

-----
item:13 (lc9q43)
Cases for this item  3842  Discrimination  0.30
Item Threshold(s):  0.71  Weighted MNSQ  1.13
Item Delta(s):      0.71

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	25	0.65	-0.11	-6.58(.000)	-0.23	0.95
A	1.00	2069	53.85	0.30	19.51(.000)	1.13	0.94
B	0.00	952	24.78	-0.09	-5.60(.000)	0.74	0.88
C	0.00	655	17.05	-0.19	-12.00(.000)	0.55	0.84
D	0.00	141	3.67	-0.16	-10.32(.000)	0.21	0.84

Item 14

```

-----
item:14 (lc9q44)
Cases for this item  3841  Discrimination  0.38
Item Threshold(s):  0.47  Weighted MNSQ  1.05
Item Delta(s):      0.47

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.79(.005)	-1.21	0.79
9	0.00	19	0.49	-0.09	-5.76(.000)	-0.20	0.76
A	1.00	2260	58.84	0.38	25.72(.000)	1.16	0.91
B	0.00	724	18.85	-0.03	-1.73(.083)	0.83	0.84
C	0.00	669	17.42	-0.37	-24.30(.000)	0.24	0.76
D	0.00	167	4.35	-0.16	-9.78(.000)	0.22	0.84

Item 15

```

-----
item:15 (lc9q45)
Cases for this item  3841  Discrimination  0.44
Item Threshold(s):  -0.02  Weighted MNSQ  1.00
Item Delta(s):      -0.01

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.01	-0.89(.375)	0.12	0.00
9	0.00	18	0.47	-0.09	-5.41(.000)	-0.18	0.77
A	0.00	98	2.55	-0.17	-10.43(.000)	0.02	0.81
B	1.00	2622	68.26	0.44	30.35(.000)	1.14	0.91
C	0.00	447	11.64	-0.25	-15.85(.000)	0.34	0.81
D	0.00	655	17.05	-0.25	-15.80(.000)	0.43	0.73

Item 16

```

-----
item:16 (lc9q46)
Cases for this item  3840  Discrimination  0.44
Item Threshold(s):  0.35  Weighted MNSQ  1.00
Item Delta(s):      0.35

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.01	-0.80(.426)	0.54	0.64
9	0.00	15	0.39	-0.07	-4.30(.000)	0.14	0.89
A	0.00	125	3.26	-0.25	-16.31(.000)	-0.21	0.81
B	0.00	1171	30.49	-0.27	-17.17(.000)	0.54	0.83
C	1.00	2350	61.20	0.44	30.23(.000)	1.19	0.88
D	0.00	177	4.61	-0.20	-12.33(.000)	0.15	0.78

Item 17

```

-----
item:17 (lc9q47)
Cases for this item  3840  Discrimination  0.52
Item Threshold(s):  -0.09  Weighted MNSQ  0.92
Item Delta(s):      -0.09

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.01	-0.46(.649)	0.59	0.00
9	0.00	28	0.73	-0.09	-5.72(.000)	-0.06	0.87
A	1.00	2673	69.61	0.52	37.70(.000)	1.18	0.87
B	0.00	579	15.08	-0.28	-18.22(.000)	0.33	0.77
C	0.00	410	10.68	-0.29	-18.97(.000)	0.18	0.76
D	0.00	149	3.88	-0.21	-13.04(.000)	0.03	0.80

Item 18

```

-----
item:18 (lc9q48)
Cases for this item  3836  Discrimination  0.49
Item Threshold(s):  -0.24  Weighted MNSQ  0.94
Item Delta(s):      -0.24

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.01	-0.49(.622)	0.62	0.80
9	0.00	15	0.39	-0.09	-5.73(.000)	-0.31	0.91
A	0.00	172	4.48	-0.16	-9.89(.000)	0.28	0.83
B	1.00	2778	72.42	0.49	35.01(.000)	1.15	0.88
C	0.00	702	18.30	-0.38	-25.27(.000)	0.22	0.71
D	0.00	167	4.35	-0.17	-10.87(.000)	0.26	0.86

Item 19

```

-----
item:19 (lc9q49)
Cases for this item  3832  Discrimination  0.52
Item Threshold(s):  0.41  Weighted MNSQ  0.93
Item Delta(s):      0.41

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.11(.267)	0.49	1.67
9	0.00	28	0.73	-0.08	-5.04(.000)	0.01	0.99
A	0.00	680	17.75	-0.32	-21.02(.000)	0.32	0.74
B	0.00	290	7.57	-0.25	-16.00(.000)	0.18	0.83
C	1.00	2307	60.20	0.52	37.33(.000)	1.25	0.86
D	0.00	525	13.70	-0.16	-10.29(.000)	0.53	0.83

Item 20

```

-----
item:20 (lc9q50)
Cases for this item  3829  Discrimination  0.28
Item Threshold(s):  1.66  Weighted MNSQ  1.12
Item Delta(s):      1.66

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	0.01	0.41(.682)	1.67	0.00
9	0.00	38	0.99	-0.08	-4.93(.000)	0.18	0.95
A	0.00	1374	35.88	-0.13	-7.98(.000)	0.75	0.83
B	0.00	704	18.39	-0.02	-1.28(.200)	0.85	0.93
C	1.00	1319	34.45	0.28	17.93(.000)	1.22	0.98
D	0.00	393	10.26	-0.18	-11.44(.000)	0.48	0.88

Item 21

```

-----
item:21 (lc9q51)
Cases for this item  3827  Discrimination  0.33
Item Threshold(s):  0.84  Weighted MNSQ  1.10
Item Delta(s):      0.85

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	47	1.23	-0.10	-6.15(.000)	0.07	0.97
A	0.00	883	23.07	-0.08	-5.10(.000)	0.78	0.91
B	0.00	667	17.43	-0.16	-10.03(.000)	0.58	0.89
C	0.00	275	7.19	-0.22	-13.89(.000)	0.24	0.77
D	1.00	1955	51.08	0.33	21.31(.000)	1.17	0.90

Item 22

```

-----
item:22 (lc9q52)
Cases for this item  3820  Discrimination  0.52
Item Threshold(s):  0.29  Weighted MNSQ  0.92
Item Delta(s):      0.29

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.27(.205)	0.21	1.26
9	0.00	16	0.42	-0.08	-4.76(.000)	-0.38	0.79
A	0.00	578	15.13	-0.28	-18.08(.000)	0.35	0.76
B	0.00	426	11.15	-0.17	-10.56(.000)	0.51	0.87
C	0.00	404	10.58	-0.31	-19.83(.000)	0.15	0.74
D	1.00	2394	62.67	0.52	37.94(.000)	1.24	0.85

Item 23

```

-----
item:23 (lc9q53)
Cases for this item  3819  Discrimination  0.40
Item Threshold(s):  1.00  Weighted MNSQ  1.03
Item Delta(s):      1.00

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.03	-1.58(.115)	0.11	1.13
9	0.00	67	1.75	-0.06	-3.94(.000)	0.40	0.82
A	0.00	894	23.41	-0.22	-13.62(.000)	0.57	0.77
B	0.00	570	14.93	-0.13	-8.40(.000)	0.61	0.86
C	0.00	458	11.99	-0.16	-9.87(.000)	0.54	0.86
D	1.00	1828	47.87	0.40	26.88(.000)	1.26	0.94

Item 24

```

-----
item:24 (lc9q54)
Cases for this item  3817  Discrimination  0.37
Item Threshold(s):  1.35  Weighted MNSQ  1.04
Item Delta(s):      1.35
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	32	0.84	-0.05	-3.02(.003)	0.37	0.97
A	0.00	537	14.07	-0.15	-9.29(.000)	0.58	0.87
B	1.00	1551	40.63	0.37	24.86(.000)	1.29	0.93
C	0.00	733	19.20	-0.07	-4.23(.000)	0.79	0.87
D	0.00	964	25.26	-0.23	-14.65(.000)	0.55	0.80

Item 25

```

-----
item:25 (lc9q55)
Cases for this item  3813  Discrimination  0.24
Item Threshold(s):  2.07  Weighted MNSQ  1.12
Item Delta(s):      2.07
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.06	-3.44(.001)	-0.46	0.25
9	0.00	22	0.58	-0.09	-5.41(.000)	0.03	0.88
A	0.00	843	22.11	-0.11	-6.81(.000)	0.74	0.87
B	0.00	960	25.18	-0.10	-5.96(.000)	0.76	0.90
C	1.00	1035	27.14	0.24	14.93(.000)	1.23	0.97
D	0.00	950	24.91	-0.02	-1.31(.191)	0.85	0.90

Item 26

```

-----
item:26 (lc9q56)
Cases for this item  3812  Discrimination  0.46
Item Threshold(s):  1.41  Weighted MNSQ  0.97
Item Delta(s):      1.41
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	0.01	0.41(.684)	1.67	0.00
9	0.00	21	0.55	-0.06	-3.95(.000)	0.20	0.73
A	1.00	1503	39.43	0.46	31.74(.000)	1.40	0.91
B	0.00	389	10.20	-0.28	-17.77(.000)	0.22	0.75
C	0.00	427	11.20	-0.18	-11.25(.000)	0.46	0.87
D	0.00	1471	38.59	-0.16	-10.10(.000)	0.71	0.77

Item 27

```

-----
item:27 (lc9q57)
Cases for this item  3803  Discrimination  0.28
Item Threshold(s):  2.13  Weighted MNSQ  1.06
Item Delta(s):      2.13
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.01	-0.35(.725)	0.70	1.37
9	0.00	19	0.50	-0.06	-3.72(.000)	0.08	0.51
A	0.00	1204	31.66	-0.04	-2.57(.010)	0.84	0.84
B	1.00	992	26.08	0.28	17.83(.000)	1.34	1.06
C	0.00	1177	30.95	-0.16	-9.69(.000)	0.69	0.85
D	0.00	409	10.75	-0.09	-5.28(.000)	0.70	0.85

Item 28

```

-----
item:28 (1c9q58)
Cases for this item  3798  Discrimination  0.29
Item Threshold(s):  2.51  Weighted MNSQ  1.03
Item Delta(s):      2.51
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.03	-2.07(.039)	-0.00	1.52
9	0.00	5	0.13	-0.03	-1.73(.084)	0.20	0.49
A	1.00	771	20.30	0.29	18.90(.000)	1.41	1.01
B	0.00	194	5.11	-0.30	-19.10(.000)	-0.14	0.75
C	0.00	43	1.13	-0.14	-8.98(.000)	-0.20	0.85
D	0.00	2782	73.25	-0.08	-4.97(.000)	0.86	0.84

```

-----
The following traditional statistics are only meaningful for complete
designs and when the amount of missing data is minimal.
In this analysis 0.43% of the data are missing.

```

The following results are scaled to assume that a single response was provided for each item.

```

N 3852
Mean 18.08
Standard Deviation 4.65
Variance 21.66
Skewness -0.34
Kurtosis -0.17
Standard error of mean 0.07
Standard error of measurement 2.13
Coefficient Alpha 0.79
-----

```

Appendix B.14 Year 9 Numeracy

=====

NAPLAN 2013, Calibration, Grade 9, Numeracy
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (n9CAq01)
Cases for this item 3804 Discrimination 0.31
Item Threshold(s): -3.25 Weighted MNSQ 0.92
Item Delta(s): -3.25

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.04	-2.36(.018)	-3.85	0.00
9	0.00	12	0.32	-0.08	-4.71(.000)	-2.20	1.43
A	0.00	45	1.18	-0.08	-4.75(.000)	-1.15	1.26
B	0.00	64	1.68	-0.17	-10.50(.000)	-1.82	0.71
C	0.00	94	2.47	-0.17	-10.70(.000)	-1.58	0.78
D	0.00	90	2.37	-0.15	-9.62(.000)	-1.47	0.84
E	1.00	3498	91.96	0.31	20.22(.000)	-0.20	1.17

=====

Item 2

item:2 (n9CAq02)
Cases for this item 3804 Discrimination 0.41
Item Threshold(s): -2.70 Weighted MNSQ 0.88
Item Delta(s): -2.70

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.71(.007)	-2.89	1.36
9	0.00	11	0.29	-0.08	-4.87(.000)	-2.26	0.96
A	0.00	279	7.33	-0.28	-17.91(.000)	-1.48	0.79
B	0.00	47	1.24	-0.14	-8.61(.000)	-1.74	0.51
C	0.00	140	3.68	-0.22	-13.96(.000)	-1.65	0.70
D	1.00	3325	87.41	0.41	27.42(.000)	-0.13	1.15

=====

Item 3

item:3 (n9CAq03)
Cases for this item 3804 Discrimination 0.32
Item Threshold(s): -2.31 Weighted MNSQ 1.02
Item Delta(s): -2.32

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.04	-2.27(.023)	-2.11	1.68
9	0.00	16	0.42	-0.08	-4.74(.000)	-1.97	1.31
A	1.00	3165	83.20	0.32	21.08(.000)	-0.14	1.19
B	0.00	357	9.38	-0.24	-15.02(.000)	-1.15	0.73
C	0.00	121	3.18	-0.17	-10.55(.000)	-1.37	0.87
D	0.00	142	3.73	-0.09	-5.34(.000)	-0.82	1.14

=====

Item 4

```

-----
item:4 (n9CAq04)
Cases for this item  3804  Discrimination  0.38
Item Threshold(s):  -1.88  Weighted MNSQ  0.99
Item Delta(s):      -1.87
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.04	-2.36(.018)	-3.85	0.00
9	0.00	15	0.39	-0.08	-5.07(.000)	-2.25	1.10
A	0.00	121	3.18	-0.16	-9.98(.000)	-1.33	0.76
B	0.00	607	15.96	-0.28	-17.77(.000)	-1.07	0.98
C	1.00	2939	77.26	0.38	25.62(.000)	-0.06	1.16
D	0.00	121	3.18	-0.15	-9.10(.000)	-1.27	0.86

Item 5

```

-----
item:5 (n9CAq05)
Cases for this item  3803  Discrimination  0.32
Item Threshold(s):  -1.94  Weighted MNSQ  1.04
Item Delta(s):      -1.94
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.04	-2.36(.018)	-3.85	0.00
9	0.00	23	0.60	-0.08	-4.84(.000)	-1.71	1.14
A	0.00	287	7.55	-0.21	-13.43(.000)	-1.16	0.91
B	0.00	176	4.63	-0.05	-3.23(.001)	-0.61	1.29
C	0.00	222	5.84	-0.14	-8.86(.000)	-0.99	0.92
D	1.00	2974	78.20	0.32	20.91(.000)	-0.11	1.17
E	0.00	120	3.16	-0.15	-9.05(.000)	-1.28	0.93

Item 6

```

-----
item:6 (n9CAq06)
Cases for this item  3803  Discrimination  0.53
Item Threshold(s):  -1.13  Weighted MNSQ  0.90
Item Delta(s):      -1.13
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.45(.014)	-2.65	1.70
9	0.00	44	1.16	-0.05	-3.17(.002)	-0.96	1.17
A	0.00	41	1.08	-0.08	-4.64(.000)	-1.10	0.89
B	0.00	1130	29.71	-0.49	-34.64(.000)	-1.17	0.78
C	1.00	2468	64.90	0.53	38.52(.000)	0.13	1.15
D	0.00	118	3.10	-0.09	-5.32(.000)	-0.85	0.91

Item 7

```

-----
item:7 (n9CAq07)
Cases for this item  3803  Discrimination  0.46
Item Threshold(s):  -1.80  Weighted MNSQ  0.92
Item Delta(s):      -1.81
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.71(.007)	-2.89	1.36
9	0.00	28	0.74	-0.07	-4.36(.000)	-1.44	1.28
A	0.00	116	3.05	-0.23	-14.42(.000)	-1.89	0.63
B	0.00	641	16.86	-0.35	-22.75(.000)	-1.19	0.75
C	1.00	2900	76.26	0.46	32.08(.000)	-0.01	1.15
D	0.00	116	3.05	-0.12	-7.43(.000)	-1.06	0.98

Item 8

```

-----
item:8 (n9CAq08)
Cases for this item  3803  Discrimination  0.51
Item Threshold(s):  -0.90  Weighted MNSQ  0.94
Item Delta(s):      -0.90

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.03	-1.84(.066)	-2.20	2.33
9	0.00	51	1.34	-0.09	-5.40(.000)	-1.33	1.00
A	0.00	298	7.84	-0.26	-16.92(.000)	-1.36	0.75
B	0.00	720	18.93	-0.25	-16.14(.000)	-0.90	0.90
C	1.00	2302	60.53	0.51	36.29(.000)	0.16	1.17
D	0.00	430	11.31	-0.21	-13.32(.000)	-0.98	0.77

Item 9

```

-----
item:9 (n9CAq09)
Cases for this item  3802  Discrimination  0.42
Item Threshold(s):  -0.76  Weighted MNSQ  1.05
Item Delta(s):      -0.76

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.71(.007)	-2.89	1.36
9	0.00	80	2.10	-0.12	-7.61(.000)	-1.38	1.05
A	0.00	592	15.57	-0.10	-6.28(.000)	-0.59	0.99
B	0.00	371	9.76	-0.26	-16.35(.000)	-1.19	0.75
C	0.00	562	14.78	-0.22	-13.83(.000)	-0.92	0.88
D	1.00	2195	57.73	0.42	28.80(.000)	0.11	1.21

Item 10

```

-----
item:10 (n9CAq10)
Cases for this item  3799  Discrimination  0.52
Item Threshold(s):  -1.24  Weighted MNSQ  0.91
Item Delta(s):      -1.24

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.04	-2.37(.018)	-3.85	0.00
9	0.00	25	0.66	-0.08	-4.98(.000)	-1.61	1.13
A	0.00	882	23.22	-0.35	-23.13(.000)	-1.03	0.76
B	0.00	252	6.63	-0.26	-16.74(.000)	-1.44	0.68
C	1.00	2542	66.91	0.52	37.36(.000)	0.11	1.16
D	0.00	97	2.55	-0.15	-9.16(.000)	-1.37	0.77

Item 11

```

-----
item:11 (n9CAq11)
Cases for this item  3798  Discrimination  0.52
Item Threshold(s):  -0.73  Weighted MNSQ  0.94
Item Delta(s):      -0.74

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.05	-2.79(.005)	-2.48	1.20
9	0.00	44	1.16	-0.10	-6.21(.000)	-1.59	1.07
A	0.00	579	15.24	-0.25	-16.16(.000)	-0.98	0.80
B	0.00	809	21.30	-0.30	-19.69(.000)	-0.99	0.90
C	1.00	2181	57.42	0.52	37.15(.000)	0.20	1.16
D	0.00	182	4.79	-0.13	-8.00(.000)	-0.97	0.87

Item 12

```

-----
item:12 (n9CAq12)
Cases for this item  3798  Discrimination  0.51
Item Threshold(s):  -0.54  Weighted MNSQ  0.95
Item Delta(s):      -0.54

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.38(.168)	-1.88	2.79
9	0.00	51	1.34	-0.04	-2.35(.019)	-0.78	0.99
A	0.00	194	5.11	-0.07	-4.63(.000)	-0.70	0.85
B	1.00	2036	53.61	0.51	36.93(.000)	0.24	1.17
C	0.00	256	6.74	-0.08	-5.17(.000)	-0.70	1.19
D	0.00	1259	33.15	-0.45	-31.45(.000)	-1.03	0.80

Item 13

```

-----
item:13 (n9CAq13)
Cases for this item  3797  Discrimination  0.53
Item Threshold(s):  -0.63  Weighted MNSQ  0.93
Item Delta(s):      -0.63

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.11	-0.05	-3.22(.001)	-2.21	1.14
9	0.00	45	1.19	-0.08	-4.66(.000)	-1.26	1.17
A	0.00	435	11.46	-0.20	-12.71(.000)	-0.94	0.91
B	1.00	2098	55.25	0.53	38.14(.000)	0.24	1.16
C	0.00	533	14.04	-0.20	-12.68(.000)	-0.88	0.94
D	0.00	682	17.96	-0.31	-19.80(.000)	-1.06	0.74

Item 14

```

-----
item:14 (n9CAq14)
Cases for this item  3794  Discrimination  0.31
Item Threshold(s):  -0.55  Weighted MNSQ  1.21
Item Delta(s):      -0.55

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.04	-2.37(.018)	-3.85	0.00
9	0.00	61	1.61	-0.09	-5.72(.000)	-1.24	0.99
A	0.00	204	5.38	-0.13	-8.36(.000)	-0.92	0.99
B	0.00	1023	26.96	-0.25	-15.62(.000)	-0.78	0.87
C	1.00	2043	53.85	0.31	19.72(.000)	0.02	1.26
D	0.00	462	12.18	-0.00	-0.07(.945)	-0.32	1.15

Item 15

```

-----
item:15 (n9CAq15)
Cases for this item  3792  Discrimination  0.44
Item Threshold(s):  -0.13  Weighted MNSQ  1.05
Item Delta(s):      -0.13

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	6	0.16	-0.03	-1.70(.090)	-1.28	1.87
9	0.00	21	0.55	-0.06	-3.52(.000)	-1.25	0.76
A	0.00	403	10.63	-0.11	-7.07(.000)	-0.67	1.05
B	0.00	852	22.47	-0.29	-18.64(.000)	-0.92	0.88
C	0.00	779	20.54	-0.14	-8.79(.000)	-0.63	1.02
D	1.00	1731	45.65	0.44	30.05(.000)	0.25	1.21

Item 16

 item:16 (n9CAq16)
 Cases for this item 3791 Discrimination 0.24
 Item Threshold(s): 0.04 Weighted MNSQ 1.29
 Item Delta(s): 0.04

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.05	-3.12(.002)	-2.68	1.03
9	0.00	92	2.43	-0.09	-5.43(.000)	-0.98	1.11
A	0.00	484	12.77	-0.03	-2.11(.035)	-0.42	1.25
B	1.00	1609	42.44	0.24	15.16(.000)	0.02	1.30
C	0.00	1387	36.59	-0.12	-7.34(.000)	-0.48	0.99
D	0.00	216	5.70	-0.15	-9.32(.000)	-1.00	0.79

Item 17

 item:17 (n9CAq17)
 Cases for this item 3788 Discrimination 0.51
 Item Threshold(s): -0.37 Weighted MNSQ 0.96
 Item Delta(s): -0.37

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.72(.006)	-2.89	1.36
9	0.00	65	1.72	-0.08	-4.66(.000)	-1.05	1.23
A	1.00	1907	50.34	0.51	36.07(.000)	0.27	1.16
B	0.00	1259	33.24	-0.30	-19.00(.000)	-0.78	0.86
C	0.00	407	10.74	-0.30	-19.07(.000)	-1.28	0.75
D	0.00	148	3.91	-0.06	-3.62(.000)	-0.60	1.36

Item 18

 item:18 (n9CAq18)
 Cases for this item 3787 Discrimination 0.34
 Item Threshold(s): -0.13 Weighted MNSQ 1.18
 Item Delta(s): -0.13

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.11	-0.04	-2.37(.018)	-1.78	1.51
9	0.00	49	1.29	-0.07	-4.49(.000)	-1.16	1.13
A	0.00	623	16.45	-0.12	-7.28(.000)	-0.61	0.94
B	1.00	1733	45.76	0.34	22.00(.000)	0.13	1.26
C	0.00	1135	29.97	-0.16	-10.14(.000)	-0.60	1.04
D	0.00	243	6.42	-0.16	-10.23(.000)	-1.03	0.94

Item 19

 item:19 (n9CAq19)
 Cases for this item 3786 Discrimination 0.56
 Item Threshold(s): 0.52 Weighted MNSQ 0.90
 Item Delta(s): 0.52

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.04	-2.38(.018)	-3.85	0.00
9	0.00	44	1.16	-0.05	-2.89(.004)	-0.96	1.36
A	1.00	1277	33.73	0.56	41.22(.000)	0.60	1.22
B	0.00	1310	34.60	-0.30	-19.52(.000)	-0.78	0.85
C	0.00	913	24.12	-0.22	-14.11(.000)	-0.76	0.89
D	0.00	241	6.37	-0.07	-4.55(.000)	-0.63	0.98

Item 20

```

-----
item:20 (n9CAq20)
Cases for this item  3784  Discrimination  0.37
Item Threshold(s):  0.57  Weighted MNSQ  1.12
Item Delta(s):      0.57

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.03	-1.94(.053)	-1.92	1.70
9	0.00	26	0.69	-0.07	-4.23(.000)	-1.38	1.21
A	0.00	680	17.97	-0.07	-4.44(.000)	-0.48	1.02
B	1.00	1244	32.88	0.37	24.18(.000)	0.31	1.35
C	0.00	1397	36.92	-0.13	-8.21(.000)	-0.51	0.94
D	0.00	434	11.47	-0.23	-14.65(.000)	-1.02	0.91

Item 21

```

-----
item:21 (n9CAq21)
Cases for this item  3782  Discrimination  0.28
Item Threshold(s):  0.05  Weighted MNSQ  1.24
Item Delta(s):      0.05

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.73(.006)	-2.89	1.36
9	0.00	110	2.91	-0.05	-3.33(.001)	-0.77	1.08
A	0.00	807	21.34	-0.19	-12.05(.000)	-0.73	0.95
B	1.00	1599	42.28	0.28	18.07(.000)	0.10	1.34
C	0.00	802	21.21	-0.08	-5.09(.000)	-0.49	1.00
D	0.00	462	12.22	-0.05	-3.14(.002)	-0.47	0.96

Item 22

```

-----
item:22 (n9CAq22)
Cases for this item  3773  Discrimination  0.57
Item Threshold(s):  0.72  Weighted MNSQ  0.89
Item Delta(s):      0.72

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2325	61.62	-0.45	-30.94(.000)	-0.70	0.96
1	1.00	1146	30.37	0.57	42.53(.000)	0.70	1.10
9	0.00	302	8.00	-0.16	-9.85(.000)	-0.96	0.94

Item 23

```

-----
item:23 (n9CAq23)
Cases for this item  3768  Discrimination  0.44
Item Threshold(s):  0.53  Weighted MNSQ  1.05
Item Delta(s):      0.53

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.05	-3.03(.002)	-2.56	1.12
9	0.00	64	1.70	-0.08	-5.01(.000)	-1.14	1.03
A	0.00	1003	26.62	-0.04	-2.63(.009)	-0.38	1.01
B	0.00	834	22.13	-0.26	-16.43(.000)	-0.85	0.88
C	0.00	601	15.95	-0.19	-11.69(.000)	-0.80	1.02
D	1.00	1263	33.52	0.44	29.90(.000)	0.42	1.24

Item 24

```

-----
item:24 (n9CAq24)
Cases for this item  3764  Discrimination  0.42
Item Threshold(s):  1.66  Weighted MNSQ  1.00
Item Delta(s):      1.66
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2660	70.67	-0.26	-16.66(.000)	-0.49	1.06
1	1.00	652	17.32	0.42	28.38(.000)	0.78	1.31
9	0.00	452	12.01	-0.12	-7.53(.000)	-0.70	0.96

Item 25

```

-----
item:25 (n9CAq25)
Cases for this item  3750  Discrimination  0.60
Item Threshold(s):  0.25  Weighted MNSQ  0.86
Item Delta(s):      0.25
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2025	54.00	-0.49	-34.79(.000)	-0.81	0.92
1	1.00	1447	38.59	0.60	46.12(.000)	0.57	1.08
9	0.00	278	7.41	-0.18	-11.08(.000)	-1.05	0.92

Item 26

```

-----
item:26 (n9CAq26)
Cases for this item  3741  Discrimination  0.36
Item Threshold(s):  1.21  Weighted MNSQ  1.08
Item Delta(s):      1.21
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.11	-0.05	-3.12(.002)	-2.23	1.10
9	0.00	134	3.58	-0.06	-3.94(.000)	-0.72	1.13
A	1.00	860	22.99	0.36	23.79(.000)	0.49	1.39
B	0.00	766	20.48	-0.30	-18.97(.000)	-0.97	0.88
C	0.00	1542	41.22	-0.03	-1.85(.064)	-0.34	1.02
D	0.00	435	11.63	-0.01	-0.85(.393)	-0.34	1.00

Item 27

```

-----
item:27 (n9CAq27)
Cases for this item  3731  Discrimination  0.55
Item Threshold(s):  2.32  Weighted MNSQ  0.82
Item Delta(s):      2.32
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2832	75.90	-0.31	-20.00(.000)	-0.49	1.00
1	1.00	409	10.96	0.55	39.74(.000)	1.54	1.01
9	0.00	490	13.13	-0.11	-6.78(.000)	-0.68	1.06

Item 28

```

-----
item:28 (n9CAq28)
Cases for this item  3722  Discrimination  0.30
Item Threshold(s):  1.27  Weighted MNSQ  1.15
Item Delta(s):      1.27

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.72(.006)	-2.89	1.36
9	0.00	39	1.05	-0.02	-1.01(.312)	-0.61	1.34
A	0.00	669	17.97	-0.04	-2.24(.025)	-0.37	1.01
B	0.00	2024	54.38	-0.18	-11.07(.000)	-0.49	1.02
C	1.00	826	22.19	0.30	19.05(.000)	0.37	1.44
D	0.00	162	4.35	-0.09	-5.45(.000)	-0.80	1.34

Item 29

```

-----
item:29 (n9CAq29)
Cases for this item  3717  Discrimination  0.54
Item Threshold(s):  1.62  Weighted MNSQ  0.88
Item Delta(s):      1.62

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2341	62.98	-0.25	-15.50(.000)	-0.50	1.02
1	1.00	664	17.86	0.54	39.00(.000)	1.04	1.14
9	0.00	712	19.16	-0.22	-13.89(.000)	-0.85	0.91

Item 30

```

-----
item:30 (n9CAq30)
Cases for this item  3501  Discrimination  0.44
Item Threshold(s):  1.98  Weighted MNSQ  0.97
Item Delta(s):      1.98

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2692	76.89	-0.31	-19.60(.000)	-0.45	1.07
1	1.00	505	14.42	0.44	29.30(.000)	1.02	1.21
9	0.00	304	8.68	-0.08	-4.92(.000)	-0.57	0.95

Item 31

```

-----
item:31 (n9CAq31)
Cases for this item  3441  Discrimination  0.54
Item Threshold(s):  2.38  Weighted MNSQ  0.81
Item Delta(s):      2.39

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2413	70.12	-0.33	-20.60(.000)	-0.50	1.02
1	1.00	375	10.90	0.54	37.20(.000)	1.60	1.13
9	0.00	653	18.98	-0.04	-2.28(.023)	-0.33	0.94

Item 32

```

-----
item:32 (n9CAq32)
Cases for this item  3231  Discrimination  0.41
Item Threshold(s):  2.84  Weighted MNSQ  0.96
Item Delta(s):      2.85
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2835	87.74	-0.31	-18.28(.000)	-0.37	1.11
1	1.00	254	7.86	0.41	25.55(.000)	1.46	1.17
9	0.00	142	4.39	-0.05	-2.76(.006)	-0.49	0.99

Item 33

```

-----
item:33 (n9NCq01)
Cases for this item  3798  Discrimination  0.51
Item Threshold(s):  -0.97  Weighted MNSQ  0.93
Item Delta(s):     -0.97
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.13	-0.03	-2.00(.046)	-1.56	1.51
9	0.00	13	0.34	-0.08	-5.00(.000)	-2.19	1.27
A	0.00	838	22.06	-0.28	-18.26(.000)	-0.93	0.89
B	0.00	300	7.90	-0.28	-18.22(.000)	-1.41	0.74
C	0.00	273	7.19	-0.16	-10.16(.000)	-0.97	0.79
D	1.00	2349	61.85	0.51	36.45(.000)	0.15	1.15
E	0.00	20	0.53	-0.07	-4.35(.000)	-1.47	1.17

Item 34

```

-----
item:34 (n9NCq02)
Cases for this item  3798  Discrimination  0.33
Item Threshold(s):  -2.70  Weighted MNSQ  0.94
Item Delta(s):     -2.69
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.66(.008)	-3.10	1.06
9	0.00	17	0.45	-0.07	-4.59(.000)	-1.86	1.16
A	0.00	62	1.63	-0.11	-6.61(.000)	-1.23	1.13
B	0.00	99	2.61	-0.19	-12.13(.000)	-1.73	0.69
C	1.00	3319	87.39	0.33	21.72(.000)	-0.16	1.16
D	0.00	299	7.87	-0.22	-14.11(.000)	-1.19	0.97

Item 35

```

-----
item:35 (n9NCq03)
Cases for this item  3797  Discrimination  0.48
Item Threshold(s):  -2.27  Weighted MNSQ  0.84
Item Delta(s):     -2.27
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.13	-0.05	-3.15(.002)	-2.19	1.02
9	0.00	8	0.21	-0.06	-3.64(.000)	-1.83	1.12
A	0.00	104	2.74	-0.22	-13.94(.000)	-1.85	0.72
B	0.00	109	2.87	-0.19	-12.08(.000)	-1.66	0.74
C	0.00	297	7.82	-0.29	-18.91(.000)	-1.46	0.68
D	0.00	133	3.50	-0.16	-10.02(.000)	-1.25	0.72
E	1.00	3141	82.72	0.48	33.61(.000)	-0.06	1.13

Item 36

 item:36 (n9NCq04)
 Cases for this item 3797 Discrimination 0.46
 Item Threshold(s): -2.09 Weighted MNSQ 0.87
 Item Delta(s): -2.09

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.11	-0.05	-3.26(.001)	-2.46	0.96
9	0.00	21	0.55	-0.09	-5.55(.000)	-1.99	1.31
A	0.00	179	4.71	-0.13	-8.38(.000)	-1.01	0.96
B	0.00	307	8.09	-0.33	-21.30(.000)	-1.57	0.66
C	0.00	233	6.14	-0.23	-14.87(.000)	-1.36	0.77
D	1.00	3053	80.41	0.46	31.85(.000)	-0.05	1.13

Item 37

 item:37 (n9NCq05)
 Cases for this item 3797 Discrimination 0.42
 Item Threshold(s): -1.35 Weighted MNSQ 1.00
 Item Delta(s): -1.35

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.04	-2.59(.010)	-2.31	1.46
9	0.00	21	0.55	-0.10	-6.18(.000)	-2.16	1.05
A	0.00	568	14.96	-0.16	-9.83(.000)	-0.73	0.92
B	0.00	589	15.51	-0.36	-23.47(.000)	-1.26	0.87
C	1.00	2616	68.90	0.42	28.38(.000)	0.01	1.17

Item 38

 item:38 (n9NCq06)
 Cases for this item 3796 Discrimination 0.40
 Item Threshold(s): -1.84 Weighted MNSQ 0.98
 Item Delta(s): -1.84

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.04	-2.66(.008)	-2.25	1.48
9	0.00	25	0.66	-0.07	-4.47(.000)	-1.70	1.58
A	0.00	483	12.72	-0.25	-16.03(.000)	-1.05	0.83
B	1.00	2916	76.82	0.40	26.93(.000)	-0.05	1.17
C	0.00	158	4.16	-0.19	-11.96(.000)	-1.38	0.76
D	0.00	211	5.56	-0.17	-10.92(.000)	-1.12	0.90

Item 39

 item:39 (n9NCq07)
 Cases for this item 3795 Discrimination 0.43
 Item Threshold(s): -1.03 Weighted MNSQ 1.03
 Item Delta(s): -1.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.11	-0.04	-2.65(.008)	-2.00	1.44
9	0.00	46	1.21	-0.07	-4.48(.000)	-1.31	1.38
A	0.00	193	5.09	-0.08	-5.15(.000)	-0.70	0.84
B	0.00	414	10.91	-0.26	-16.91(.000)	-1.17	0.86
C	1.00	2393	63.06	0.43	29.08(.000)	0.07	1.20
D	0.00	745	19.63	-0.24	-15.32(.000)	-0.86	0.88

Item 40

```

-----
item:40 (n9NCq08)
Cases for this item  3795  Discrimination  0.34
Item Threshold(s):  -1.01  Weighted MNSQ  1.13
Item Delta(s):      -1.00

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.60(.009)	-2.96	1.25
9	0.00	76	2.00	-0.08	-5.19(.000)	-1.10	1.25
A	0.00	527	13.89	-0.26	-16.79(.000)	-1.06	0.90
B	1.00	2374	62.56	0.34	22.01(.000)	-0.01	1.20
C	0.00	312	8.22	-0.17	-10.83(.000)	-0.97	0.88
D	0.00	504	13.28	-0.03	-2.11(.035)	-0.40	1.08

Item 41

```

-----
item:41 (n9NCq09)
Cases for this item  3795  Discrimination  0.42
Item Threshold(s):  -1.27  Weighted MNSQ  1.01
Item Delta(s):      -1.27

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	21	0.55	-0.03	-1.97(.049)	-0.84	1.28
9	0.00	28	0.74	-0.08	-4.71(.000)	-1.53	1.24
A	0.00	218	5.74	-0.16	-9.81(.000)	-1.04	0.93
B	1.00	2558	67.40	0.42	28.39(.000)	0.02	1.17
C	0.00	404	10.65	-0.12	-7.20(.000)	-0.68	0.98
D	0.00	566	14.91	-0.32	-20.99(.000)	-1.17	0.89

Item 42

```

-----
item:42 (n9NCq10)
Cases for this item  3795  Discrimination  0.55
Item Threshold(s):  -0.58  Weighted MNSQ  0.91
Item Delta(s):      -0.58

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.66(.008)	-2.97	1.25
9	0.00	22	0.58	-0.08	-5.08(.000)	-1.79	1.09
A	0.00	650	17.13	-0.37	-24.61(.000)	-1.24	0.83
B	0.00	185	4.87	-0.13	-8.23(.000)	-1.00	0.91
C	1.00	2062	54.33	0.55	40.21(.000)	0.26	1.13
D	0.00	845	22.27	-0.22	-13.70(.000)	-0.76	0.89
E	0.00	29	0.76	-0.07	-4.57(.000)	-1.26	0.83

Item 43

```

-----
item:43 (n9NCq11)
Cases for this item  3795  Discrimination  0.48
Item Threshold(s):  -0.41  Weighted MNSQ  1.00
Item Delta(s):      -0.41

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.05	-3.02(.003)	-2.48	1.20
9	0.00	58	1.53	-0.09	-5.47(.000)	-1.23	1.24
A	0.00	923	24.32	-0.34	-22.55(.000)	-0.99	0.77
B	0.00	684	18.02	-0.18	-11.59(.000)	-0.77	1.17
C	1.00	1938	51.07	0.48	33.46(.000)	0.22	1.15
D	0.00	189	4.98	-0.04	-2.22(.027)	-0.47	0.94

Item 44

```

-----
item:44 (n9NCq12)
Cases for this item  3795  Discrimination  0.41
Item Threshold(s):  -1.13  Weighted MNSQ  1.04
Item Delta(s):      -1.13
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.11	-0.03	-1.67(.096)	-1.53	1.65
9	0.00	33	0.87	-0.10	-6.41(.000)	-1.85	1.12
A	0.00	497	13.10	-0.18	-11.39(.000)	-0.86	0.99
B	1.00	2465	64.95	0.41	27.60(.000)	0.04	1.19
C	0.00	447	11.78	-0.23	-14.79(.000)	-1.02	0.80
D	0.00	349	9.20	-0.17	-10.38(.000)	-0.92	0.94

Item 45

```

-----
item:45 (n9NCq13)
Cases for this item  3795  Discrimination  0.37
Item Threshold(s):  -0.19  Weighted MNSQ  1.13
Item Delta(s):      -0.19
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.13	-0.01	-0.53(.594)	-0.51	2.46
9	0.00	63	1.66	-0.10	-6.20(.000)	-1.37	1.17
A	0.00	509	13.41	-0.09	-5.59(.000)	-0.59	0.96
B	0.00	333	8.77	-0.19	-12.07(.000)	-1.03	0.96
C	0.00	1111	29.28	-0.19	-12.20(.000)	-0.65	1.00
D	1.00	1774	46.75	0.37	24.86(.000)	0.16	1.23

Item 46

```

-----
item:46 (n9NCq14)
Cases for this item  3795  Discrimination  0.47
Item Threshold(s):  -0.01  Weighted MNSQ  1.02
Item Delta(s):      -0.01
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.02	-1.41(.160)	-1.25	2.27
9	0.00	30	0.79	-0.08	-5.01(.000)	-1.62	1.44
A	1.00	1641	43.24	0.47	32.56(.000)	0.31	1.21
B	0.00	1771	46.67	-0.32	-21.16(.000)	-0.70	0.91
C	0.00	278	7.33	-0.15	-9.35(.000)	-0.93	1.06
D	0.00	72	1.90	-0.16	-10.30(.000)	-1.73	0.77

Item 47

```

-----
item:47 (n9NCq15)
Cases for this item  3795  Discrimination  0.39
Item Threshold(s):  -0.44  Weighted MNSQ  1.11
Item Delta(s):      -0.44
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	6	0.16	-0.04	-2.31(.021)	-1.59	1.36
9	0.00	89	2.35	-0.08	-5.17(.000)	-1.04	1.19
A	1.00	1959	51.62	0.39	26.01(.000)	0.13	1.23
B	0.00	898	23.66	-0.21	-12.93(.000)	-0.73	0.91
C	0.00	614	16.18	-0.16	-10.02(.000)	-0.72	1.00
D	0.00	141	3.72	-0.12	-7.30(.000)	-1.02	0.97
E	0.00	88	2.32	-0.08	-4.76(.000)	-0.97	1.14

Item 48

```

-----
item:48 (n9NCq16)
Cases for this item  3794  Discrimination  0.42
Item Threshold(s):  -0.22  Weighted MNSQ  1.07
Item Delta(s):      -0.22

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.13	-0.05	-2.85(.004)	-1.96	1.23
9	0.00	33	0.87	-0.08	-5.24(.000)	-1.58	0.97
A	0.00	786	20.72	-0.08	-5.05(.000)	-0.49	0.96
B	0.00	604	15.92	-0.30	-19.67(.000)	-1.11	0.84
C	1.00	1794	47.29	0.42	28.81(.000)	0.21	1.24
D	0.00	572	15.08	-0.16	-10.04(.000)	-0.74	0.92

Item 49

```

-----
item:49 (n9NCq17)
Cases for this item  3794  Discrimination  0.30
Item Threshold(s):  -0.13  Weighted MNSQ  1.22
Item Delta(s):      -0.13

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.04	-2.26(.024)	-2.04	1.76
9	0.00	44	1.16	-0.08	-5.18(.000)	-1.41	1.27
A	0.00	642	16.92	-0.17	-10.80(.000)	-0.73	0.95
B	1.00	1730	45.60	0.30	19.53(.000)	0.07	1.27
C	0.00	643	16.95	-0.10	-6.43(.000)	-0.57	1.05
D	0.00	732	19.29	-0.09	-5.77(.000)	-0.54	1.09

Item 50

```

-----
item:50 (n9NCq18)
Cases for this item  3794  Discrimination  0.50
Item Threshold(s):  0.39  Weighted MNSQ  0.97
Item Delta(s):      0.39

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.02	-1.17(.242)	-1.25	2.30
9	0.00	41	1.08	-0.08	-4.70(.000)	-1.30	1.33
A	1.00	1361	35.87	0.50	35.71(.000)	0.46	1.23
B	0.00	456	12.02	-0.09	-5.35(.000)	-0.59	0.98
C	0.00	1534	40.43	-0.31	-20.10(.000)	-0.74	0.93
D	0.00	399	10.52	-0.17	-10.55(.000)	-0.85	0.91

Item 51

```

-----
item:51 (n9NCq19)
Cases for this item  3794  Discrimination  0.58
Item Threshold(s):  1.06  Weighted MNSQ  0.85
Item Delta(s):      1.06

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2428	64.00	-0.38	-25.48(.000)	-0.63	0.95
1	1.00	946	24.93	0.58	43.66(.000)	0.85	1.14
9	0.00	420	11.07	-0.21	-13.39(.000)	-1.04	0.92

Item 52

```

-----
item:52 (n9NCq20)
Cases for this item  3790  Discrimination  0.59
Item Threshold(s):  0.60  Weighted MNSQ  0.87
Item Delta(s):      0.60
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2298	60.63	-0.47	-32.55(.000)	-0.73	0.93
1	1.00	1224	32.30	0.59	44.94(.000)	0.67	1.12
9	0.00	268	7.07	-0.18	-11.56(.000)	-1.13	0.89

Item 53

```

-----
item:53 (n9NCq21)
Cases for this item  3789  Discrimination  0.62
Item Threshold(s):  0.16  Weighted MNSQ  0.83
Item Delta(s):      0.16
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.05	-3.02(.003)	-2.64	1.06
9	0.00	84	2.22	-0.09	-5.64(.000)	-1.16	1.07
A	0.00	1116	29.45	-0.20	-12.50(.000)	-0.66	0.85
B	0.00	569	15.02	-0.28	-18.10(.000)	-1.05	0.79
C	0.00	496	13.09	-0.29	-18.46(.000)	-1.14	0.75
D	1.00	1521	40.14	0.62	48.47(.000)	0.55	1.13

Item 54

```

-----
item:54 (n9NCq22)
Cases for this item  3789  Discrimination  0.49
Item Threshold(s):  1.15  Weighted MNSQ  0.96
Item Delta(s):      1.15
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2776	73.26	-0.41	-27.67(.000)	-0.59	1.00
1	1.00	898	23.70	0.49	34.87(.000)	0.72	1.19
9	0.00	115	3.04	-0.16	-10.24(.000)	-1.49	0.89

Item 55

```

-----
item:55 (n9NCq23)
Cases for this item  3788  Discrimination  0.55
Item Threshold(s):  0.35  Weighted MNSQ  0.92
Item Delta(s):      0.35
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2014	53.17	-0.42	-28.79(.000)	-0.75	0.96
1	1.00	1388	36.64	0.55	40.58(.000)	0.53	1.14
9	0.00	386	10.19	-0.18	-11.12(.000)	-0.96	0.88

Item 56

```

-----
item:56 (n9NCq24)
Cases for this item  3788  Discrimination  0.56
Item Threshold(s):  1.20  Weighted MNSQ  0.86
Item Delta(s):      1.20
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2474	65.31	-0.45	-30.60(.000)	-0.67	0.94
1	1.00	874	23.07	0.56	41.60(.000)	0.89	1.17
9	0.00	440	11.62	-0.07	-4.62(.000)	-0.60	1.06

Item 57

```

-----
item:57 (n9NCq25)
Cases for this item  3785  Discrimination  0.40
Item Threshold(s):  1.61  Weighted MNSQ  1.02
Item Delta(s):      1.61
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2729	72.10	-0.22	-13.83(.000)	-0.46	1.05
1	1.00	674	17.81	0.40	26.99(.000)	0.71	1.33
9	0.00	382	10.09	-0.18	-11.49(.000)	-0.96	0.96

Item 58

```

-----
item:58 (n9NCq26)
Cases for this item  3783  Discrimination  0.34
Item Threshold(s):  0.87  Weighted MNSQ  1.15
Item Delta(s):      0.87
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.48(.013)	-2.65	1.70
9	0.00	17	0.45	-0.06	-3.54(.000)	-1.50	1.21
A	1.00	1057	27.94	0.34	22.03(.000)	0.34	1.31
B	0.00	704	18.61	-0.39	-25.92(.000)	-1.24	0.87
C	0.00	1913	50.57	0.02	1.41(.157)	-0.28	0.99
D	0.00	90	2.38	-0.05	-2.80(.005)	-0.66	1.28

Item 59

```

-----
item:59 (n9NCq27)
Cases for this item  3782  Discrimination  0.48
Item Threshold(s):  1.50  Weighted MNSQ  0.93
Item Delta(s):      1.50
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.13	-0.05	-3.07(.002)	-2.04	1.27
9	0.00	48	1.27	-0.07	-4.50(.000)	-1.20	1.27
A	0.00	966	25.54	-0.21	-12.88(.000)	-0.71	0.92
B	0.00	1283	33.92	-0.19	-12.00(.000)	-0.60	0.95
C	0.00	758	20.04	0.00	0.04(.966)	-0.31	1.13
D	1.00	722	19.09	0.48	33.90(.000)	0.84	1.28

Item 60

```

-----
item:60 (n9NCq28)
Cases for this item  3770  Discrimination  0.49
Item Threshold(s):  2.70  Weighted MNSQ  0.85
Item Delta(s):      2.70
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2879	76.37	-0.23	-14.21(.000)	-0.44	1.04
1	1.00	310	8.22	0.49	34.45(.000)	1.66	1.13
9	0.00	581	15.41	-0.11	-6.60(.000)	-0.64	1.03

Item 61

```

-----
item:61 (n9NCq29)
Cases for this item  3751  Discrimination  0.34
Item Threshold(s):  1.71  Weighted MNSQ  1.05
Item Delta(s):      1.71
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	6	0.16	-0.04	-2.40(.017)	-1.60	1.32
9	0.00	67	1.79	-0.03	-1.74(.081)	-0.60	1.12
A	1.00	628	16.74	0.34	22.43(.000)	0.63	1.47
B	0.00	1144	30.50	-0.02	-1.05(.292)	-0.35	1.08
C	0.00	1346	35.88	-0.17	-10.77(.000)	-0.56	1.00
D	0.00	560	14.93	-0.09	-5.54(.000)	-0.54	1.01

Item 62

```

-----
item:62 (n9NCq30)
Cases for this item  3750  Discrimination  0.44
Item Threshold(s):  2.02  Weighted MNSQ  0.95
Item Delta(s):      2.02
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2960	78.93	-0.26	-16.51(.000)	-0.45	1.04
1	1.00	509	13.57	0.44	30.10(.000)	1.00	1.28
9	0.00	281	7.49	-0.17	-10.61(.000)	-1.03	0.98

Item 63

```

-----
item:63 (n9NCq31)
Cases for this item  3640  Discrimination  0.43
Item Threshold(s):  2.55  Weighted MNSQ  0.95
Item Delta(s):      2.54
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	3170	87.09	-0.32	-20.11(.000)	-0.41	1.08
1	1.00	345	9.48	0.43	28.45(.000)	1.30	1.14
9	0.00	125	3.43	-0.10	-6.29(.000)	-0.94	0.90

Item 64

```

-----
item:64 (n9NCq32)
Cases for this item  3580  Discrimination  0.36
Item Threshold(s):  2.79  Weighted MNSQ  0.99
Item Delta(s):      2.79
-----

```

Label	Score	Count	% of tot	Pt Bis	t	(p)	PV1Avg:1	PV1 SD:1
0	0.00	2992	83.58	-0.23	-14.16	(.000)	-0.37	1.11
1	1.00	283	7.91	0.36	23.03	(.000)	1.21	1.35
9	0.00	305	8.52	-0.04	-2.50	(.013)	-0.43	0.97

```

=====
-----

```

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 1.47% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

```

N                3818
Mean             28.86
Standard Deviation 12.23
Variance         149.52
Skewness         0.50
Kurtosis         -0.36
Standard error of mean 0.20
Standard error of measurement 3.25
Coefficient Alpha 0.93
=====

```

Appendix B.15 Year 9 Reading

=====

NAPLAN 2013, Calibration, Grade 9, Reading
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (r9q01)
Cases for this item 3826 Discrimination 0.33
Item Threshold(s): -3.23 Weighted MNSQ 0.91
Item Delta(s): -3.23

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.16(.002)	-3.12	0.00
9	0.00	1	0.03	-0.03	-1.81(.070)	-1.29	0.00
A	0.00	17	0.44	-0.12	-7.62(.000)	-1.27	0.52
B	0.00	87	2.27	-0.26	-16.31(.000)	-1.14	0.67
C	0.00	37	0.97	-0.15	-9.45(.000)	-0.93	0.67
D	1.00	3683	96.26	0.33	21.48(.000)	0.50	0.93

=====

Item 2

item:2 (r9q02)
Cases for this item 3826 Discrimination 0.15
Item Threshold(s): 1.00 Weighted MNSQ 1.25
Item Delta(s): 1.00

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.16(.002)	-3.12	0.00
9	0.00	19	0.50	-0.03	-1.66(.096)	0.21	0.86
A	0.00	865	22.61	-0.12	-7.41(.000)	0.23	0.89
B	0.00	962	25.14	0.08	4.79(.000)	0.56	0.91
C	1.00	1475	38.55	0.15	9.43(.000)	0.63	1.01
D	0.00	504	13.17	-0.16	-10.08(.000)	0.05	0.95

=====

Item 3

item:3 (r9q03)
Cases for this item 3826 Discrimination 0.41
Item Threshold(s): -1.10 Weighted MNSQ 0.96
Item Delta(s): -1.10

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	814	21.28	-0.41	-27.69(.000)	-0.26	0.92
1	1.00	3007	78.59	0.41	28.03(.000)	0.64	0.90
9	0.00	5	0.13	-0.06	-3.62(.000)	-0.94	0.72

=====

Item 4

item:4 (r9q04)
Cases for this item 3826 Discrimination 0.45
Item Threshold(s): -1.18 Weighted MNSQ 0.93
Item Delta(s): -1.18

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	13	0.34	-0.04	-2.51(.012)	-0.20	0.69
A	0.00	175	4.57	-0.25	-16.22(.000)	-0.59	0.71
B	0.00	389	10.17	-0.21	-13.40(.000)	-0.13	0.82
C	0.00	199	5.20	-0.28	-17.74(.000)	-0.62	0.76
D	1.00	3050	79.72	0.45	31.09(.000)	0.65	0.91

=====

Item 5

item:5 (r9q05)
Cases for this item 3826 Discrimination 0.35
Item Threshold(s): -0.91 Weighted MNSQ 1.03
Item Delta(s): -0.90

```
-----
Label      Score      Count      % of tot  Pt Bis      t      (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         1          0.03     -0.02     -1.15(.252) -0.42      0.00
9          0.00         2          0.05     -0.03     -1.61(.107) -0.57      0.22
A          0.00        663        17.33    -0.22     -14.05(.000) 0.00      0.93
B          1.00       2891       75.56     0.35      23.22(.000) 0.63      0.92
C          0.00         41         1.07     -0.15     -9.22(.000) -0.83      0.96
D          0.00        228        5.96     -0.22     -13.67(.000) -0.36      0.77
=====
```

Item 6

```
-----
item:6 (r9q06)
Cases for this item  3826  Discrimination  0.39
Item Threshold(s):  -1.82  Weighted MNSQ  0.93
Item Delta(s):      -1.82
=====
```

```
-----
Label      Score      Count      % of tot  Pt Bis      t      (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         1          0.03     -0.01     -0.92(.356) -0.91      0.00
9          0.00         8          0.21     -0.04     -2.57(.010) -0.29      1.21
A          0.00         81         2.12     -0.19     -11.88(.000) -0.70      0.67
B          0.00        106        2.77     -0.25     -15.66(.000) -0.90      0.75
C          1.00       3344       87.40     0.39      26.38(.000) 0.58      0.92
D          0.00        286        7.48     -0.23     -14.65(.000) -0.27      0.82
=====
```

Item 7

```
-----
item:7 (r9q07)
Cases for this item  3826  Discrimination  0.38
Item Threshold(s):  -1.14  Weighted MNSQ  0.99
Item Delta(s):      -1.14
=====
```

```
-----
Label      Score      Count      % of tot  Pt Bis      t      (p)      PVI Avg:1  PVI SD:1
-----
8          0.00         1          0.03     -0.03     -1.70(.089) -0.97      0.00
9          0.00         5          0.13     -0.06     -3.65(.000) -0.93      0.75
A          1.00       3028       79.14     0.38      25.03(.000) 0.62      0.92
B          0.00        380        9.93     -0.16     -9.99(.000) -0.02      0.92
C          0.00        319        8.34     -0.23     -14.31(.000) -0.22      0.78
D          0.00         93         2.43     -0.26     -16.57(.000) -1.05      0.73
=====
```

Item 8

```
-----
item:8 (r9q08)
Cases for this item  3825  Discrimination  0.45
Item Threshold(s):   0.48  Weighted MNSQ  0.99
Item Delta(s):       0.47
=====
```

```
-----
Label      Score      Count      % of tot  Pt Bis      t      (p)      PVI Avg:1  PVI SD:1
-----
9          0.00         14         0.37     -0.06     -3.77(.000) -0.44      0.64
A          0.00        544        14.22    -0.11     -7.13(.000) 0.21      0.89
B          1.00       1887       49.33     0.45      31.32(.000) 0.86      0.90
C          0.00        528        13.80    -0.18     -11.47(.000) 0.03      0.90
D          0.00        852        22.27    -0.29     -18.51(.000) -0.05      0.82
=====
```

Item 9

```

-----
item:9 (r9q09)
Cases for this item  3825  Discrimination  0.38
Item Threshold(s):  -0.13  Weighted MNSQ  1.05
Item Delta(s):      -0.13
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
9	0.00	10	0.26	-0.05	-3.02(.003)	-0.57	1.01
A	0.00	100	2.61	-0.15	-9.56(.000)	-0.39	1.00
B	0.00	162	4.24	-0.17	-10.70(.000)	-0.27	0.94
C	0.00	1193	31.19	-0.26	-16.76(.000)	0.09	0.90
D	1.00	2360	61.70	0.38	25.03(.000)	0.71	0.91

Item 10

```

-----
item:10 (r9q10)
Cases for this item  3825  Discrimination  0.41
Item Threshold(s):  -2.01  Weighted MNSQ  0.91
Item Delta(s):      -2.01
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.06	-3.44(.001)	-1.91	1.72
9	0.00	6	0.16	-0.06	-3.77(.000)	-1.21	1.21
A	0.00	80	2.09	-0.16	-9.78(.000)	-0.54	0.92
B	0.00	72	1.88	-0.17	-10.72(.000)	-0.60	0.67
C	1.00	3410	89.15	0.41	27.62(.000)	0.57	0.92
D	0.00	255	6.67	-0.31	-20.24(.000)	-0.60	0.73

Item 11

```

-----
item:11 (r9q11)
Cases for this item  3824  Discrimination  0.39
Item Threshold(s):   0.40  Weighted MNSQ  1.04
Item Delta(s):       0.40
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.03	-2.02(.043)	-0.78	1.06
9	0.00	14	0.37	-0.07	-4.16(.000)	-0.74	0.58
A	0.00	863	22.57	-0.17	-10.58(.000)	0.14	0.79
B	0.00	511	13.36	-0.23	-14.29(.000)	-0.07	0.85
C	1.00	1948	50.94	0.39	26.09(.000)	0.80	0.97
D	0.00	486	12.71	-0.13	-7.94(.000)	0.14	0.84

Item 12

```

-----
item:12 (r9q12)
Cases for this item  3824  Discrimination  0.37
Item Threshold(s):  -0.19  Weighted MNSQ  1.06
Item Delta(s):      -0.19
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.13	-0.04	-2.72(.007)	-0.83	1.29
A	0.00	1150	30.07	-0.32	-20.70(.000)	0.01	0.86
B	1.00	2403	62.84	0.37	24.85(.000)	0.71	0.94
C	0.00	36	0.94	-0.14	-8.56(.000)	-0.87	0.88
D	0.00	230	6.01	-0.08	-5.17(.000)	0.11	0.82

Item 13

```

-----
item:13 (r9ql3)
Cases for this item  3824  Discrimination  0.46
Item Threshold(s):  1.05  Weighted MNSQ  0.96
Item Delta(s):      1.04

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.16(.002)	-3.12	0.00
9	0.00	27	0.71	-0.03	-1.88(.060)	0.11	0.84
A	0.00	444	11.61	-0.18	-11.19(.000)	-0.00	0.86
B	0.00	1405	36.74	-0.18	-11.39(.000)	0.22	0.86
C	0.00	504	13.18	-0.23	-14.37(.000)	-0.08	0.79
D	1.00	1443	37.74	0.46	32.27(.000)	1.00	0.90

Item 14

```

-----
item:14 (r9ql4)
Cases for this item  3824  Discrimination  0.56
Item Threshold(s):  -0.59  Weighted MNSQ  0.86
Item Delta(s):      -0.58

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.16(.002)	-3.12	0.00
9	0.00	8	0.21	-0.05	-2.95(.003)	-0.37	0.46
A	0.00	609	15.93	-0.34	-22.20(.000)	-0.25	0.75
B	0.00	133	3.48	-0.21	-13.60(.000)	-0.57	0.79
C	0.00	390	10.20	-0.30	-19.56(.000)	-0.37	0.75
D	1.00	2683	70.16	0.56	42.06(.000)	0.78	0.86

Item 15

```

-----
item:15 (r9ql5)
Cases for this item  3824  Discrimination  0.59
Item Threshold(s):  -0.70  Weighted MNSQ  0.83
Item Delta(s):      -0.70

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.49(.013)	-1.70	2.02
9	0.00	17	0.44	-0.06	-3.58(.000)	-0.39	0.77
A	0.00	543	14.20	-0.30	-19.58(.000)	-0.23	0.70
B	1.00	2758	72.12	0.59	44.89(.000)	0.77	0.86
C	0.00	292	7.64	-0.36	-24.15(.000)	-0.67	0.65
D	0.00	212	5.54	-0.25	-15.80(.000)	-0.45	0.69

Item 16

```

-----
item:16 (r9ql6)
Cases for this item  3823  Discrimination  0.51
Item Threshold(s):  -1.76  Weighted MNSQ  0.84
Item Delta(s):      -1.76

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.05	-2.98(.003)	-1.35	1.54
9	0.00	14	0.37	-0.08	-4.80(.000)	-0.77	0.97
A	0.00	141	3.69	-0.30	-19.53(.000)	-0.92	0.57
B	0.00	143	3.74	-0.22	-14.03(.000)	-0.57	0.69
C	0.00	204	5.34	-0.30	-19.23(.000)	-0.68	0.68
D	1.00	3318	86.79	0.51	36.34(.000)	0.62	0.88

Item 17

```

-----
item:17 (r9q17)
Cases for this item  3821  Discrimination  0.42
Item Threshold(s):  0.06  Weighted MNSQ  1.01
Item Delta(s):      0.06

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.17(.002)	-3.12	0.00
9	0.00	23	0.60	-0.08	-4.77(.000)	-0.52	0.88
A	0.00	780	20.41	-0.13	-7.91(.000)	0.22	0.85
B	0.00	262	6.86	-0.31	-19.85(.000)	-0.57	0.73
C	1.00	2211	57.86	0.42	28.67(.000)	0.77	0.90
D	0.00	544	14.24	-0.21	-13.12(.000)	-0.02	0.86

Item 18

```

-----
item:18 (r9q18)
Cases for this item  3821  Discrimination  0.47
Item Threshold(s):  0.36  Weighted MNSQ  0.97
Item Delta(s):      0.36

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.26(.024)	-1.39	2.46
9	0.00	39	1.02	-0.07	-4.53(.000)	-0.24	0.86
A	1.00	1978	51.77	0.47	32.55(.000)	0.87	0.91
B	0.00	463	12.12	-0.20	-12.55(.000)	-0.03	0.83
C	0.00	628	16.44	-0.28	-17.79(.000)	-0.14	0.76
D	0.00	711	18.61	-0.15	-9.18(.000)	0.15	0.84

Item 19

```

-----
item:19 (r9q19)
Cases for this item  3821  Discrimination  0.37
Item Threshold(s):  1.38  Weighted MNSQ  1.02
Item Delta(s):      1.38

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.05	-3.29(.001)	-1.33	1.55
9	0.00	43	1.13	-0.05	-3.33(.001)	-0.05	0.90
A	1.00	1203	31.48	0.37	24.84(.000)	0.95	0.95
B	0.00	1194	31.25	-0.05	-3.40(.001)	0.37	0.92
C	0.00	280	7.33	-0.29	-18.67(.000)	-0.49	0.73
D	0.00	1098	28.74	-0.14	-8.99(.000)	0.24	0.80

Item 20

```

-----
item:20 (r9q20)
Cases for this item  3820  Discrimination  0.37
Item Threshold(s):  -0.48  Weighted MNSQ  1.03
Item Delta(s):      -0.48

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.03	-2.11(.035)	-1.37	2.49
9	0.00	23	0.60	-0.09	-5.43(.000)	-0.47	1.00
A	1.00	2611	68.35	0.37	24.99(.000)	0.68	0.92
B	0.00	318	8.32	-0.14	-8.44(.000)	0.07	0.96
C	0.00	319	8.35	-0.28	-18.32(.000)	-0.40	0.82
D	0.00	547	14.32	-0.15	-9.06(.000)	0.09	0.83

Item 21

```

-----
item:21 (r9q21)
Cases for this item  3817  Discrimination  0.54
Item Threshold(s):  0.53  Weighted MNSQ  0.89
Item Delta(s):      0.53

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.17(.002)	-3.12	0.00
9	0.00	26	0.68	-0.04	-2.57(.010)	0.01	0.96
A	0.00	1033	27.06	-0.26	-16.74(.000)	0.06	0.75
B	0.00	539	14.12	-0.19	-12.05(.000)	0.00	0.81
C	1.00	1839	48.18	0.54	39.71(.000)	0.96	0.89
D	0.00	379	9.93	-0.28	-17.87(.000)	-0.32	0.72

Item 22

```

-----
item:22 (r9q22)
Cases for this item  3816  Discrimination  0.32
Item Threshold(s):  1.20  Weighted MNSQ  1.08
Item Delta(s):      1.19

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	5	0.13	-0.04	-2.60(.009)	-0.77	1.76
9	0.00	52	1.36	-0.05	-3.17(.002)	0.10	0.95
A	1.00	1332	34.91	0.32	20.96(.000)	0.86	0.96
B	0.00	857	22.46	-0.09	-5.52(.000)	0.30	0.91
C	0.00	479	12.55	-0.16	-10.03(.000)	0.09	0.90
D	0.00	1091	28.59	-0.12	-7.64(.000)	0.25	0.88

Item 23

```

-----
item:23 (r9q23)
Cases for this item  3814  Discrimination  0.41
Item Threshold(s):  0.66  Weighted MNSQ  1.02
Item Delta(s):      0.67

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.10	-0.05	-2.88(.004)	-1.06	1.68
9	0.00	23	0.60	-0.04	-2.42(.015)	-0.01	0.77
A	0.00	600	15.73	-0.19	-11.96(.000)	0.04	0.85
B	0.00	1177	30.86	-0.13	-8.31(.000)	0.26	0.84
C	0.00	277	7.26	-0.26	-16.36(.000)	-0.35	0.74
D	1.00	1733	45.44	0.41	27.39(.000)	0.86	0.94

Item 24

```

-----
item:24 (r9q24)
Cases for this item  3813  Discrimination  0.49
Item Threshold(s):  -0.60  Weighted MNSQ  0.92
Item Delta(s):      -0.60

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.07	-4.03(.000)	-1.92	1.05
9	0.00	20	0.52	-0.05	-3.38(.001)	-0.18	0.90
A	0.00	182	4.77	-0.19	-11.66(.000)	-0.33	0.81
B	0.00	408	10.70	-0.30	-19.17(.000)	-0.31	0.74
C	1.00	2690	70.55	0.49	35.14(.000)	0.74	0.89
D	0.00	510	13.38	-0.26	-16.62(.000)	-0.17	0.78

Item 25

```

-----
item:25 (r9q25)
Cases for this item  3811  Discrimination  0.45
Item Threshold(s):  0.69  Weighted MNSQ  0.98
Item Delta(s):      0.69
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.06	-3.55(.000)	-2.28	1.20
9	0.00	16	0.42	-0.05	-3.24(.001)	-0.26	0.50
A	1.00	1717	45.05	0.45	31.09(.000)	0.91	0.90
B	0.00	1126	29.55	-0.11	-6.92(.000)	0.29	0.79
C	0.00	454	11.91	-0.24	-15.26(.000)	-0.15	0.87
D	0.00	496	13.01	-0.27	-17.24(.000)	-0.20	0.82

Item 26

```

-----
item:26 (r9q26)
Cases for this item  3810  Discrimination  0.43
Item Threshold(s):  -1.44  Weighted MNSQ  0.92
Item Delta(s):      -1.43
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.67(.008)	-1.85	1.80
9	0.00	4	0.10	-0.04	-2.19(.029)	-0.50	0.42
A	0.00	210	5.51	-0.22	-13.93(.000)	-0.40	0.82
B	1.00	3169	83.18	0.43	29.47(.000)	0.63	0.90
C	0.00	178	4.67	-0.22	-14.24(.000)	-0.43	0.83
D	0.00	247	6.48	-0.25	-15.87(.000)	-0.40	0.83

Item 27

```

-----
item:27 (r9q27)
Cases for this item  3810  Discrimination  0.41
Item Threshold(s):  0.03  Weighted MNSQ  1.02
Item Delta(s):      0.03
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.06	-3.71(.000)	-1.85	1.10
9	0.00	9	0.24	-0.02	-1.20(.232)	0.17	0.79
A	0.00	457	11.99	-0.28	-17.94(.000)	-0.24	0.83
B	1.00	2232	58.58	0.41	27.68(.000)	0.76	0.91
C	0.00	456	11.97	-0.20	-12.32(.000)	-0.04	0.84
D	0.00	653	17.14	-0.12	-7.38(.000)	0.22	0.88

Item 28

```

-----
item:28 (r9q28)
Cases for this item  3810  Discrimination  0.49
Item Threshold(s):  -1.20  Weighted MNSQ  0.89
Item Delta(s):      -1.20
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.18(.001)	-3.12	0.00
9	0.00	17	0.45	-0.07	-4.05(.000)	-0.40	0.45
A	0.00	241	6.33	-0.19	-12.17(.000)	-0.23	0.91
B	0.00	235	6.17	-0.30	-19.64(.000)	-0.61	0.67
C	1.00	3050	80.05	0.49	34.50(.000)	0.67	0.89
D	0.00	266	6.98	-0.27	-17.55(.000)	-0.47	0.63

Item 29

```

-----
item:29 (r9q29)
Cases for this item  3809  Discrimination  0.34
Item Threshold(s):  1.34  Weighted MNSQ  1.04
Item Delta(s):      1.34

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.51(.012)	-1.41	2.43
9	0.00	23	0.60	-0.04	-2.26(.024)	0.13	0.89
A	1.00	1225	32.16	0.34	22.65(.000)	0.92	0.96
B	0.00	814	21.37	-0.10	-6.33(.000)	0.28	0.88
C	0.00	1161	30.48	-0.06	-3.85(.000)	0.35	0.87
D	0.00	584	15.33	-0.24	-15.30(.000)	-0.08	0.85

Item 30

```

-----
item:30 (r9q30)
Cases for this item  3809  Discrimination  0.16
Item Threshold(s):  1.93  Weighted MNSQ  1.15
Item Delta(s):      1.93

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	3	0.08	-0.03	-1.56(.120)	-0.47	2.30
9	0.00	52	1.37	0.02	1.28(.201)	0.59	0.85
A	1.00	851	22.34	0.16	10.20(.000)	0.73	1.07
B	0.00	1247	32.74	-0.09	-5.80(.000)	0.33	0.93
C	0.00	682	17.90	-0.03	-1.77(.078)	0.38	0.94
D	0.00	974	25.57	-0.03	-2.08(.038)	0.40	0.89

Item 31

```

-----
item:31 (r9q31)
Cases for this item  3809  Discrimination  0.26
Item Threshold(s):  -0.79  Weighted MNSQ  1.10
Item Delta(s):      -0.79

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.02	-1.24(.214)	-0.37	3.89
9	0.00	5	0.13	-0.04	-2.50(.013)	-0.45	0.78
A	0.00	313	8.22	-0.18	-11.11(.000)	-0.07	1.00
B	0.00	106	2.78	-0.24	-15.23(.000)	-0.80	0.56
C	1.00	2811	73.80	0.26	16.52(.000)	0.59	0.90
D	0.00	572	15.02	-0.07	-4.10(.000)	0.29	1.04

Item 32

```

-----
item:32 (r9q32)
Cases for this item  3809  Discrimination  0.24
Item Threshold(s):  1.39  Weighted MNSQ  1.14
Item Delta(s):      1.39

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.05	-3.07(.002)	-1.77	1.92
9	0.00	29	0.76	-0.08	-5.08(.000)	-0.42	0.89
A	0.00	1355	35.57	-0.08	-5.23(.000)	0.33	0.86
B	1.00	1191	31.27	0.24	15.40(.000)	0.80	0.97
C	0.00	964	25.31	-0.07	-4.19(.000)	0.34	0.95
D	0.00	268	7.04	-0.13	-8.29(.000)	0.02	1.06

Item 33

item:33 (r9q33)Cases for this item 3801 Discrimination 0.55
Item Threshold(s): 0.20 Weighted MNSQ 0.89
Item Delta(s): 0.19

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.19(.001)	-3.12	0.00
9	0.00	26	0.68	-0.07	-4.41(.000)	-0.32	0.80
A	0.00	524	13.79	-0.21	-13.04(.000)	0.01	0.85
B	0.00	912	23.99	-0.38	-25.05(.000)	-0.14	0.70
C	1.00	2102	55.30	0.55	40.60(.000)	0.90	0.87
D	0.00	236	6.21	-0.14	-8.94(.000)	-0.09	0.90

Item 34

item:34 (r9q34)Cases for this item 3801 Discrimination 0.30
Item Threshold(s): 0.80 Weighted MNSQ 1.13
Item Delta(s): 0.80

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.06	-3.48(.001)	-2.08	1.48
9	0.00	25	0.66	-0.07	-4.08(.000)	-0.18	0.86
A	0.00	1269	33.39	-0.16	-9.83(.000)	0.25	0.88
B	0.00	286	7.52	-0.27	-17.55(.000)	-0.41	0.80
C	0.00	594	15.63	0.01	0.52(.605)	0.49	1.06
D	1.00	1625	42.75	0.30	19.62(.000)	0.76	0.88

Item 35

item:35 (r9q35)Cases for this item 3801 Discrimination 0.37
Item Threshold(s): 0.27 Weighted MNSQ 1.06
Item Delta(s): 0.27

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.19(.001)	-3.12	0.00
9	0.00	25	0.66	-0.08	-4.74(.000)	-0.35	0.94
A	0.00	538	14.15	-0.16	-9.90(.000)	0.13	0.84
B	1.00	2046	53.83	0.37	24.62(.000)	0.76	0.93
C	0.00	600	15.79	-0.15	-9.58(.000)	0.14	0.96
D	0.00	591	15.55	-0.18	-11.52(.000)	0.06	0.82

Item 36

item:36 (r9q36)Cases for this item 3799 Discrimination 0.50
Item Threshold(s): -0.68 Weighted MNSQ 0.92
Item Delta(s): -0.68

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.06	-3.57(.000)	-2.04	1.54
9	0.00	21	0.55	-0.06	-3.81(.000)	-0.20	0.70
A	1.00	2737	72.05	0.50	35.69(.000)	0.74	0.89
B	0.00	230	6.05	-0.28	-18.18(.000)	-0.57	0.63
C	0.00	373	9.82	-0.27	-17.33(.000)	-0.29	0.77
D	0.00	436	11.48	-0.22	-14.07(.000)	-0.10	0.71

Item 37

```

-----
item:37 (r9q37)
Cases for this item  3797  Discrimination  0.47
Item Threshold(s):  -0.08  Weighted MNSQ  0.96
Item Delta(s):      -0.08
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.69(.007)	-1.74	1.96
9	0.00	23	0.61	-0.06	-3.96(.000)	-0.22	0.62
A	1.00	2310	60.84	0.47	32.50(.000)	0.79	0.90
B	0.00	563	14.83	-0.15	-9.29(.000)	0.12	0.89
C	0.00	350	9.22	-0.26	-16.73(.000)	-0.26	0.75
D	0.00	549	14.46	-0.26	-16.89(.000)	-0.12	0.78

Item 38

```

-----
item:38 (r9q38)
Cases for this item  3795  Discrimination  0.35
Item Threshold(s):   0.91  Weighted MNSQ  1.07
Item Delta(s):      0.91
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.20(.001)	-3.12	0.00
9	0.00	20	0.53	-0.04	-2.31(.021)	-0.15	0.76
A	0.00	584	15.39	-0.16	-10.14(.000)	0.10	0.89
B	0.00	431	11.36	-0.21	-13.45(.000)	-0.06	0.81
C	0.00	1218	32.09	-0.09	-5.80(.000)	0.34	0.92
D	1.00	1541	40.61	0.35	23.28(.000)	0.84	0.92

Item 39

```

-----
item:39 (r9q39)
Cases for this item  3788  Discrimination  0.43
Item Threshold(s):  -0.91  Weighted MNSQ  0.95
Item Delta(s):      -0.92
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.21(.027)	-1.36	2.50
9	0.00	11	0.29	-0.06	-3.70(.000)	-0.58	0.50
A	0.00	272	7.18	-0.27	-17.41(.000)	-0.44	0.73
B	1.00	2879	76.00	0.43	29.57(.000)	0.67	0.90
C	0.00	333	8.79	-0.22	-13.98(.000)	-0.17	0.86
D	0.00	291	7.68	-0.18	-11.26(.000)	-0.08	0.90

Item 40

```

-----
item:40 (r9q40)
Cases for this item  3788  Discrimination  0.43
Item Threshold(s):   0.15  Weighted MNSQ  1.01
Item Delta(s):      0.14
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.06	-3.49(.000)	-2.16	1.36
9	0.00	21	0.55	-0.06	-3.62(.000)	-0.17	0.85
A	0.00	559	14.76	-0.14	-8.98(.000)	0.14	0.80
B	0.00	715	18.88	-0.28	-17.84(.000)	-0.05	0.85
C	1.00	2135	56.36	0.43	29.15(.000)	0.80	0.92
D	0.00	356	9.40	-0.16	-9.93(.000)	-0.00	0.87

Item 41

```

-----
item:41 (r9q41)
Cases for this item  3784  Discrimination  0.43
Item Threshold(s):  -0.84  Weighted MNSQ  0.96
Item Delta(s):      -0.85

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.05	-3.09(.002)	-1.77	1.92
9	0.00	16	0.42	-0.02	-1.15(.251)	0.25	0.90
A	0.00	322	8.51	-0.27	-17.01(.000)	-0.33	0.77
B	0.00	327	8.64	-0.23	-14.86(.000)	-0.23	0.89
C	1.00	2834	74.89	0.43	29.49(.000)	0.68	0.90
D	0.00	283	7.48	-0.17	-10.61(.000)	-0.08	0.82

Item 42

```

-----
item:42 (r9q42)
Cases for this item  3784  Discrimination  0.38
Item Threshold(s):   0.82  Weighted MNSQ  1.04
Item Delta(s):      0.82

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	4	0.11	-0.04	-2.51(.012)	-0.61	1.90
9	0.00	38	1.00	-0.05	-3.01(.003)	-0.03	0.87
A	1.00	1605	42.42	0.38	24.90(.000)	0.86	0.95
B	0.00	724	19.13	-0.19	-11.94(.000)	0.09	0.83
C	0.00	1275	33.69	-0.13	-8.07(.000)	0.29	0.84
D	0.00	138	3.65	-0.23	-14.42(.000)	-0.60	0.76

Item 43

```

-----
item:43 (r9q43)
Cases for this item  3783  Discrimination  0.44
Item Threshold(s):   0.07  Weighted MNSQ  0.99
Item Delta(s):      0.07

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.04	-2.37(.018)	-1.51	2.28
9	0.00	14	0.37	-0.04	-2.16(.031)	-0.11	0.77
A	0.00	470	12.42	-0.20	-12.46(.000)	-0.04	0.85
B	1.00	2190	57.89	0.44	30.32(.000)	0.81	0.90
C	0.00	753	19.90	-0.25	-16.18(.000)	-0.01	0.78
D	0.00	354	9.36	-0.17	-10.33(.000)	0.00	0.93

Item 44

```

-----
item:44 (r9q44)
Cases for this item  3782  Discrimination  0.51
Item Threshold(s):   0.50  Weighted MNSQ  0.92
Item Delta(s):      0.50

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.20(.001)	-3.12	0.00
9	0.00	16	0.42	-0.04	-2.26(.024)	-0.13	1.14
A	0.00	283	7.48	-0.23	-14.83(.000)	-0.27	0.74
B	0.00	1183	31.28	-0.23	-14.51(.000)	0.13	0.79
C	0.00	442	11.69	-0.27	-16.96(.000)	-0.21	0.77
D	1.00	1857	49.10	0.51	36.82(.000)	0.94	0.88

Item 45

```

-----
item:45 (r9q45)
Cases for this item  3772  Discrimination  0.30
Item Threshold(s):  0.98  Weighted MNSQ  1.11
Item Delta(s):      0.98
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.20(.001)	-3.12	0.00
9	0.00	19	0.50	-0.02	-1.00(.315)	0.25	0.90
A	0.00	1279	33.91	-0.06	-3.66(.000)	0.38	0.87
B	1.00	1480	39.24	0.30	19.06(.000)	0.80	0.98
C	0.00	468	12.41	-0.17	-10.42(.000)	0.04	0.83
D	0.00	525	13.92	-0.17	-10.70(.000)	0.10	0.92

Item 46

```

-----
item:46 (r9q46)
Cases for this item  3769  Discrimination  0.28
Item Threshold(s):  3.33  Weighted MNSQ  0.99
Item Delta(s):      3.33
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2619	69.49	0.02	1.32(.186)	0.48	0.95
1	1.00	287	7.61	0.28	17.56(.000)	1.33	0.75
9	0.00	863	22.90	-0.20	-12.35(.000)	0.13	0.88

Item 47

```

-----
item:47 (r9q47)
Cases for this item  3760  Discrimination  0.33
Item Threshold(s):  1.21  Weighted MNSQ  1.06
Item Delta(s):      1.21
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	1	0.03	-0.05	-3.21(.001)	-3.12	0.00
9	0.00	20	0.53	-0.04	-2.75(.006)	0.01	0.80
A	1.00	1309	34.81	0.33	21.47(.000)	0.89	0.96
B	0.00	806	21.44	-0.16	-10.10(.000)	0.16	0.82
C	0.00	907	24.12	-0.15	-9.16(.000)	0.22	0.91
D	0.00	717	19.07	-0.06	-3.66(.000)	0.34	0.91

Item 48

```

-----
item:48 (r9q48)
Cases for this item  3757  Discrimination  0.45
Item Threshold(s):  0.04  Weighted MNSQ  0.98
Item Delta(s):      0.04
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.06	-3.66(.000)	-1.95	1.66
9	0.00	74	1.97	-0.05	-2.87(.004)	0.22	0.98
A	0.00	626	16.66	-0.26	-16.18(.000)	-0.05	0.75
B	0.00	623	16.58	-0.27	-17.33(.000)	-0.09	0.82
C	1.00	2203	58.64	0.45	30.83(.000)	0.80	0.91
D	0.00	229	6.10	-0.07	-4.39(.000)	0.22	0.95

Item 49

item:49 (r9q49)Cases for this item 3687 Discrimination 0.52
Item Threshold(s): 0.03 Weighted MNSQ 0.92
Item Delta(s): 0.03

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
8	0.00	2	0.05	-0.06	-3.75(.000)	-2.30	1.16
9	0.00	3	0.08	-0.04	-2.38(.017)	-0.72	0.66
A	0.00	580	15.73	-0.23	-14.16(.000)	-0.00	0.82
B	1.00	2175	58.99	0.52	36.96(.000)	0.86	0.87
C	0.00	573	15.54	-0.27	-16.79(.000)	-0.10	0.79
D	0.00	354	9.60	-0.25	-15.74(.000)	-0.22	0.71

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 0.54% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	3826
Mean	28.28
Standard Deviation	8.97
Variance	80.50
Skewness	-0.17
Kurtosis	-0.73
Standard error of mean	0.15
Standard error of measurement	2.97
Coefficient Alpha	0.89

Appendix B.16 Year 9 Spelling

=====

NAPLAN 2013, Calibration, Grade 9, Spelling
GENERALISED ITEM ANALYSIS

=====

Item 1

item:1 (lc9q01)
Cases for this item 3856 Discrimination 0.53
Item Threshold(s): -2.73 Weighted MNSQ 0.88
Item Delta(s): -2.74

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	508	13.17	-0.51	-37.23(.000)	-2.40	1.57
1	1.00	3325	86.23	0.53	38.71(.000)	0.32	1.48
9	0.00	23	0.60	-0.11	-6.82(.000)	-2.43	1.23

=====

Item 2

item:2 (lc9q02)
Cases for this item 3856 Discrimination 0.57
Item Threshold(s): -2.25 Weighted MNSQ 0.88
Item Delta(s): -2.25

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	663	17.19	-0.54	-39.78(.000)	-2.06	1.52
1	1.00	3152	81.74	0.57	43.57(.000)	0.41	1.46
9	0.00	41	1.06	-0.18	-11.28(.000)	-2.99	1.14

=====

Item 3

item:3 (lc9q03)
Cases for this item 3850 Discrimination 0.56
Item Threshold(s): -1.78 Weighted MNSQ 0.99
Item Delta(s): -1.78

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	778	20.21	-0.48	-33.87(.000)	-1.66	1.59
1	1.00	2947	76.55	0.56	41.42(.000)	0.47	1.46
9	0.00	125	3.25	-0.24	-15.47(.000)	-2.18	1.36

=====

Item 4

item:4 (lc9q04)
Cases for this item 3844 Discrimination 0.40
Item Threshold(s): -1.63 Weighted MNSQ 1.24
Item Delta(s): -1.62

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	659	17.14	-0.25	-16.17(.000)	-1.00	2.03
1	1.00	2869	74.64	0.40	26.91(.000)	0.36	1.50
9	0.00	316	8.22	-0.28	-18.39(.000)	-1.73	1.51

=====

Item 5

```

-----
item:5 (lc9q05)
Cases for this item  3838  Discrimination  0.57
Item Threshold(s):  -1.34  Weighted MNSQ  0.99
Item Delta(s):      -1.34

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	978	25.48	-0.48	-34.04(.000)	-1.42	1.56
1	1.00	2722	70.92	0.57	42.87(.000)	0.58	1.41
9	0.00	138	3.60	-0.26	-16.73(.000)	-2.44	1.43

Item 6

```

-----
item:6 (lc9q06)
Cases for this item  3835  Discrimination  0.60
Item Threshold(s):  -0.39  Weighted MNSQ  1.00
Item Delta(s):      -0.39

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1553	40.50	-0.54	-39.41(.000)	-1.08	1.54
1	1.00	2165	56.45	0.60	46.75(.000)	0.83	1.37
9	0.00	117	3.05	-0.20	-12.94(.000)	-2.14	1.43

Item 7

```

-----
item:7 (lc9q07)
Cases for this item  3834  Discrimination  0.57
Item Threshold(s):  -0.39  Weighted MNSQ  1.06
Item Delta(s):      -0.39

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1508	39.33	-0.50	-35.29(.000)	-1.01	1.54
1	1.00	2168	56.55	0.57	42.95(.000)	0.77	1.43
9	0.00	158	4.12	-0.20	-12.93(.000)	-1.83	1.67

Item 8

```

-----
item:8 (lc9q08)
Cases for this item  3830  Discrimination  0.54
Item Threshold(s):  0.58  Weighted MNSQ  1.07
Item Delta(s):      0.58

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2086	54.46	-0.41	-28.07(.000)	-0.64	1.53
1	1.00	1552	40.52	0.54	40.04(.000)	1.06	1.38
9	0.00	192	5.01	-0.28	-18.01(.000)	-2.21	1.40

Item 9

```

-----
item:9 (lc9q09)
Cases for this item  3824  Discrimination  0.58
Item Threshold(s):  0.34  Weighted MNSQ  1.01
Item Delta(s):      0.34

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1915	50.08	-0.46	-32.36(.000)	-0.77	1.47
1	1.00	1699	44.43	0.58	44.49(.000)	1.04	1.40
9	0.00	210	5.49	-0.26	-16.39(.000)	-1.86	1.46

Item 10

```

-----
item:10 (lc9q10)
Cases for this item  3823  Discrimination  0.58
Item Threshold(s):  0.36  Weighted MNSQ  1.01
Item Delta(s):      0.36
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1985	51.92	-0.49	-34.56(.000)	-0.78	1.47
1	1.00	1689	44.18	0.58	44.33(.000)	1.05	1.39
9	0.00	149	3.90	-0.24	-14.97(.000)	-2.20	1.45

Item 11

```

-----
item:11 (lc9q11)
Cases for this item  3821  Discrimination  0.60
Item Threshold(s):  -0.04  Weighted MNSQ  1.00
Item Delta(s):      -0.04
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1757	45.98	-0.52	-37.18(.000)	-0.92	1.55
1	1.00	1942	50.82	0.60	45.88(.000)	0.93	1.33
9	0.00	122	3.19	-0.23	-14.84(.000)	-2.28	1.26

Item 12

```

-----
item:12 (lc9q12)
Cases for this item  3818  Discrimination  0.60
Item Threshold(s):  0.55  Weighted MNSQ  0.97
Item Delta(s):      0.55
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2169	56.81	-0.54	-39.54(.000)	-0.78	1.51
1	1.00	1565	40.99	0.60	46.45(.000)	1.15	1.32
9	0.00	84	2.20	-0.19	-12.25(.000)	-2.27	1.19

Item 13

```

-----
item:13 (lc9q13)
Cases for this item  3816  Discrimination  0.58
Item Threshold(s):  0.59  Weighted MNSQ  1.01
Item Delta(s):      0.60
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1993	52.23	-0.44	-29.99(.000)	-0.69	1.52
1	1.00	1538	40.30	0.58	43.90(.000)	1.14	1.35
9	0.00	285	7.47	-0.25	-16.02(.000)	-1.57	1.42

Item 14

```

-----
item:14 (lc9q14)
Cases for this item  3809  Discrimination  0.56
Item Threshold(s):  1.42  Weighted MNSQ  0.97
Item Delta(s):      1.42
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2554	67.05	-0.41	-28.10(.000)	-0.49	1.50
1	1.00	1057	27.75	0.56	41.23(.000)	1.46	1.30
9	0.00	198	5.20	-0.24	-15.47(.000)	-1.81	1.46

Item 15

```

-----
item:15 (lc9q15)
Cases for this item  3806  Discrimination  0.50
Item Threshold(s):  1.73  Weighted MNSQ  1.01
Item Delta(s):      1.73
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2594	68.16	-0.28	-18.25(.000)	-0.32	1.53
1	1.00	897	23.57	0.50	35.47(.000)	1.46	1.38
9	0.00	315	8.28	-0.29	-18.57(.000)	-1.68	1.46

Item 16

```

-----
item:16 (lc9q16)
Cases for this item  3803  Discrimination  0.54
Item Threshold(s):  1.88  Weighted MNSQ  0.93
Item Delta(s):      1.88
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2621	68.92	-0.30	-19.74(.000)	-0.34	1.51
1	1.00	825	21.69	0.54	39.72(.000)	1.67	1.26
9	0.00	357	9.39	-0.28	-18.09(.000)	-1.52	1.48

Item 17

```

-----
item:17 (lc9q17)
Cases for this item  3799  Discrimination  0.49
Item Threshold(s):  -2.87  Weighted MNSQ  0.89
Item Delta(s):      -2.87
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	415	10.92	-0.46	-31.58(.000)	-2.27	1.54
1	1.00	3337	87.84	0.49	34.98(.000)	0.31	1.49
9	0.00	47	1.24	-0.17	-10.79(.000)	-3.10	1.53

Item 18

```

-----
item:18 (lc9q18)
Cases for this item  3792  Discrimination  0.59
Item Threshold(s):  -2.13  Weighted MNSQ  0.83
Item Delta(s):      -2.13
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	612	16.14	-0.52	-37.87(.000)	-1.99	1.45
1	1.00	3080	81.22	0.59	44.79(.000)	0.47	1.41
9	0.00	100	2.64	-0.23	-14.60(.000)	-2.54	1.37

Item 19

```

-----
item:19 (lc9q19)
Cases for this item  3774  Discrimination  0.54
Item Threshold(s):  -1.14  Weighted MNSQ  1.05
Item Delta(s):      -1.14
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	841	22.28	-0.41	-27.28(.000)	-1.19	1.60
1	1.00	2598	68.84	0.54	39.55(.000)	0.61	1.43
9	0.00	335	8.88	-0.29	-18.45(.000)	-1.59	1.44

Item 20

```

-----
item:20 (lc9q20)
Cases for this item  3750  Discrimination  0.60
Item Threshold(s):  -0.74  Weighted MNSQ  0.96
Item Delta(s):      -0.74

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1046	27.89	-0.46	-32.04(.000)	-1.13	1.48
1	1.00	2365	63.07	0.60	46.11(.000)	0.77	1.36
9	0.00	339	9.04	-0.29	-18.36(.000)	-1.54	1.38

Item 21

```

-----
item:21 (lc9q21)
Cases for this item  3736  Discrimination  0.45
Item Threshold(s):  -0.43  Weighted MNSQ  1.23
Item Delta(s):      -0.43

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1329	35.57	-0.36	-23.34(.000)	-0.76	1.62
1	1.00	2172	58.14	0.45	31.05(.000)	0.67	1.49
9	0.00	235	6.29	-0.22	-13.58(.000)	-1.32	1.31

Item 22

```

-----
item:22 (lc9q22)
Cases for this item  3711  Discrimination  0.60
Item Threshold(s):  -1.13  Weighted MNSQ  0.93
Item Delta(s):      -1.13

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	896	24.14	-0.49	-33.86(.000)	-1.33	1.50
1	1.00	2572	69.31	0.60	46.00(.000)	0.70	1.36
9	0.00	243	6.55	-0.28	-17.97(.000)	-1.75	1.24

Item 23

```

-----
item:23 (lc9q23)
Cases for this item  3675  Discrimination  0.55
Item Threshold(s):  0.25  Weighted MNSQ  1.07
Item Delta(s):      0.25

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1637	44.54	-0.41	-27.27(.000)	-0.65	1.49
1	1.00	1739	47.32	0.55	39.47(.000)	0.99	1.38
9	0.00	299	8.14	-0.25	-15.69(.000)	-1.33	1.32

Item 24

```

-----
item:24 (lc9q24)
Cases for this item  3662  Discrimination  0.64
Item Threshold(s):  -0.27  Weighted MNSQ  0.91
Item Delta(s):      -0.28

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	1374	37.52	-0.52	-37.18(.000)	-0.97	1.42
1	1.00	2062	56.31	0.64	49.96(.000)	0.96	1.30
9	0.00	226	6.17	-0.26	-16.23(.000)	-1.53	1.23

Item 25

```

-----
item:25 (lc9q25)
Cases for this item  3640  Discrimination  0.59
Item Threshold(s):  1.41  Weighted MNSQ  0.91
Item Delta(s):      1.40

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2145	58.93	-0.42	-27.64(.000)	-0.45	1.47
1	1.00	1056	29.01	0.59	43.85(.000)	1.53	1.26
9	0.00	439	12.06	-0.19	-11.68(.000)	-0.73	1.32

Item 26

```

-----
item:26 (lc9q26)
Cases for this item  3612  Discrimination  0.54
Item Threshold(s):  1.87  Weighted MNSQ  0.93
Item Delta(s):      1.87

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2281	63.15	-0.35	-22.52(.000)	-0.32	1.51
1	1.00	825	22.84	0.54	38.79(.000)	1.67	1.22
9	0.00	506	14.01	-0.17	-10.26(.000)	-0.57	1.39

Item 27

```

-----
item:27 (lc9q27)
Cases for this item  3578  Discrimination  0.51
Item Threshold(s):  1.18  Weighted MNSQ  1.07
Item Delta(s):      1.18

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2111	59.00	-0.33	-20.88(.000)	-0.32	1.51
1	1.00	1170	32.70	0.51	35.80(.000)	1.28	1.33
9	0.00	297	8.30	-0.29	-17.83(.000)	-1.30	1.13

Item 28

```

-----
item:28 (lc9q28)
Cases for this item  3544  Discrimination  0.49
Item Threshold(s):  2.16  Weighted MNSQ  0.98
Item Delta(s):      2.16

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2533	71.47	-0.29	-18.00(.000)	-0.15	1.51
1	1.00	693	19.55	0.49	33.82(.000)	1.70	1.27
9	0.00	318	8.97	-0.23	-13.96(.000)	-0.98	1.24

Item 29

```

-----
item:29 (lc9q29)
Cases for this item  3486  Discrimination  0.46
Item Threshold(s):  1.92  Weighted MNSQ  1.05
Item Delta(s):      1.92

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2361	67.73	-0.35	-22.18(.000)	-0.22	1.56
1	1.00	790	22.66	0.46	30.67(.000)	1.47	1.38
9	0.00	335	9.61	-0.10	-5.76(.000)	-0.30	1.27

Item 30

```

-----
item:30 (lc9q30)
Cases for this item  3370  Discrimination  0.40
Item Threshold(s):  3.03  Weighted MNSQ  0.98
Item Delta(s):      3.03
-----

```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	2702	80.18	-0.22	-13.18(.000)	-0.01	1.57
1	1.00	389	11.54	0.40	25.50(.000)	2.00	1.35
9	0.00	279	8.28	-0.15	-8.57(.000)	-0.59	1.31

```

=====
-----

```

The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.
In this analysis 2.84% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

```

N 3856
Mean 14.94
Standard Deviation 7.36
Variance 54.16
Skewness -0.10
Kurtosis -0.75
Standard error of mean 0.12
Standard error of measurement 2.15
Coefficient Alpha 0.91
=====

```

Appendix B.17 Year 3, 5, 7, 9 Writing

```
=====
NAPLAN 2013, Calibration, All Grades, Writing
GENERALISED ITEM ANALYSIS
=====
```

```
Item 1
-----
```

```
item:1 (WQ01_Audience)
Cases for this item 17283 Discrimination 0.92
Item Threshold(s): -11.37 -5.76 -1.47 2.63 5.97 9.01 Weighted MNSQ 0.78
Item Delta(s): -11.37 -5.75 -1.47 2.65 5.98 8.96
-----
```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	68	0.39	-0.20	-26.58(.000)	-9.91	1.89
1	1.00	853	4.94	-0.46	-67.54(.000)	-6.52	1.92
2	2.00	4078	23.60	-0.50	-75.17(.000)	-2.56	1.54
3	3.00	7226	41.81	-0.01	-1.14(.255)	0.59	1.47
4	4.00	3796	21.96	0.46	68.84(.000)	3.51	1.43
5	5.00	1068	6.18	0.44	64.43(.000)	6.16	1.36
6	6.00	194	1.12	0.27	36.81(.000)	8.80	1.35

```
Item 2
-----
```

```
item:2 (WQ02_Text_Structure)
Cases for this item 17283 Discrimination 0.87
Item Threshold(s): -7.71 -2.28 2.07 6.63 Weighted MNSQ 0.96
Item Delta(s): -7.71 -2.28 2.07 6.62
-----
```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	384	2.22	-0.36	-50.40(.000)	-7.62	3.04
1	1.00	3451	19.97	-0.56	-87.98(.000)	-3.36	1.90
2	2.00	7476	43.26	-0.12	-16.04(.000)	0.13	1.72
3	3.00	5038	29.15	0.51	77.83(.000)	3.25	1.71
4	4.00	934	5.40	0.46	67.76(.000)	6.79	1.73

```
Item 3
-----
```

```
item:3 (WQ03_Ideas)
Cases for this item 17283 Discrimination 0.88
Item Threshold(s): -8.93 -5.55 -0.91 4.59 8.84 Weighted MNSQ 0.92
Item Delta(s): -8.90 -5.58 -0.91 4.60 8.83
-----
```

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	207	1.20	-0.32	-44.61(.000)	-9.39	2.02
1	1.00	812	4.70	-0.38	-54.11(.000)	-5.55	1.81
2	2.00	4926	28.50	-0.49	-73.68(.000)	-2.14	1.76
3	3.00	8836	51.13	0.24	32.24(.000)	1.40	1.76
4	4.00	2262	13.09	0.54	85.34(.000)	5.19	1.58
5	5.00	240	1.39	0.29	39.26(.000)	8.40	1.47

Item 4

 item:4 (WQ04_Persuasive_devices)
 Cases for this item 17283 Discrimination 0.87
 Item Threshold(s): -7.63 -1.69 2.70 6.92 Weighted MNSQ 0.95
 Item Delta(s): -7.62 -1.68 2.71 6.91

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
0	0.00	404	2.34	-0.37	-52.47(.000)	-7.69	2.84
1	1.00	4266	24.68	-0.57	-90.94(.000)	-2.93	1.96
2	2.00	7676	44.41	-0.03	-3.46(.001)	0.52	1.68
3	3.00	4149	24.01	0.52	80.61(.000)	3.68	1.69
4	4.00	788	4.56	0.44	63.81(.000)	7.05	1.67

Item 5

 item:5 (WQ05_Vocabulary)
 Cases for this item 17283 Discrimination 0.86
 Item Threshold(s): -9.34 -6.48 0.89 4.82 8.63 Weighted MNSQ 0.99
 Item Delta(s): -9.29 -6.53 0.91 4.82 8.60

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
0	0.00	169	0.98	-0.30	-42.02(.000)	-9.85	1.73
1	1.00	523	3.03	-0.34	-46.95(.000)	-6.19	1.84
2	2.00	8425	48.75	-0.53	-83.10(.000)	-1.32	2.10
3	3.00	5953	34.44	0.33	45.79(.000)	2.13	1.70
4	4.00	1942	11.24	0.51	77.96(.000)	5.29	1.57
5	5.00	271	1.57	0.30	41.36(.000)	8.31	1.49

Item 6

 item:6 (WQ06_Cohesion)
 Cases for this item 17283 Discrimination 0.84
 Item Threshold(s): -9.22 -4.50 2.58 7.70 Weighted MNSQ 0.93
 Item Delta(s): -9.21 -4.51 2.58 7.69

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
0	0.00	193	1.12	-0.32	-43.98(.000)	-9.64	1.73
1	1.00	1471	8.51	-0.46	-68.34(.000)	-4.80	1.98
2	2.00	10437	60.39	-0.32	-44.20(.000)	-0.30	2.05
3	3.00	4662	26.97	0.57	91.29(.000)	3.71	1.80
4	4.00	520	3.01	0.38	53.86(.000)	7.54	1.63

Item 7

 item:7 (WQ07_Paragraphing)
 Cases for this item 17283 Discrimination 0.83
 Item Threshold(s): -3.24 1.27 6.27 Weighted MNSQ 1.05
 Item Delta(s): -3.23 1.27 6.26

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:l	PV1 SD:l
0	0.00	2713	15.70	-0.60	-99.18(.000)	-4.35	2.48
1	1.00	7167	41.47	-0.26	-35.20(.000)	-0.46	1.87
2	2.00	6259	36.21	0.48	72.02(.000)	2.74	1.91
3	3.00	1144	6.62	0.46	69.04(.000)	6.25	1.97

Item 8

 item:8 (WQ08_Sentance_Structure)

Cases for this item 17283 Discrimination 0.89

Item Threshold(s): -8.64 -5.16 -0.69 2.91 6.55 9.90 Weighted MNSQ 1.06

Item Delta(s): -8.60 -5.18 -0.67 2.91 6.56 9.86

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	237	1.37	-0.34	-47.37(.000)	-9.29	1.76
1	1.00	976	5.65	-0.39	-56.05(.000)	-5.15	1.84
2	2.00	5035	29.13	-0.45	-66.67(.000)	-1.89	1.82
3	3.00	6463	37.40	0.08	10.24(.000)	0.97	1.64
4	4.00	3627	20.99	0.47	70.80(.000)	3.65	1.65
5	5.00	842	4.87	0.41	59.81(.000)	6.51	1.50
6	6.00	103	0.60	0.20	27.31(.000)	9.21	1.57

=====

Item 9

 item:9 (WQ09_Punctuation)

Cases for this item 17283 Discrimination 0.80

Item Threshold(s): -8.47 -4.25 0.41 4.98 8.98 Weighted MNSQ 1.43

Item Delta(s): -8.45 -4.25 0.41 4.99 8.96

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	264	1.53	-0.33	-46.24(.000)	-8.57	2.36
1	1.00	1546	8.95	-0.44	-63.89(.000)	-4.39	2.15
2	2.00	6445	37.29	-0.33	-46.43(.000)	-0.91	2.12
3	3.00	6935	40.13	0.33	45.66(.000)	1.95	2.11
4	4.00	1877	10.86	0.45	66.24(.000)	4.80	2.10
5	5.00	216	1.25	0.23	31.19(.000)	7.29	2.33

=====

Item 10

 item:10 (WQ10_Spelling)

Cases for this item 17283 Discrimination 0.86

Item Threshold(s): -9.57 -6.11 -2.45 0.97 4.75 8.71 Weighted MNSQ 1.23

Item Delta(s): -9.55 -6.12 -2.44 0.96 4.75 8.69

Label	Score	Count	% of tot	Pt Bis	t (p)	PV1Avg:1	PV1 SD:1
0	0.00	157	0.91	-0.29	-40.54(.000)	-9.90	1.54
1	1.00	607	3.51	-0.37	-51.70(.000)	-6.28	1.66
2	2.00	2812	16.27	-0.45	-65.82(.000)	-3.04	1.64
3	3.00	5756	33.30	-0.17	-22.93(.000)	-0.22	1.79
4	4.00	5677	32.85	0.33	45.24(.000)	2.17	1.85
5	5.00	2016	11.66	0.49	74.59(.000)	5.04	1.99
6	6.00	258	1.49	0.25	33.94(.000)	7.20	2.06

=====

 The following traditional statistics are only meaningful for complete designs and when the amount of missing data is minimal.

In this analysis 0.00% of the data are missing.

The following results are scaled to assume that a single response was provided for each item.

N	17283
Mean	24.86
Standard Deviation	7.76
Variance	60.23
Skewness	-0.07
Kurtosis	0.38
Standard error of mean	0.06
Standard error of measurement	1.55
Coefficient Alpha	0.96

=====

APPENDIX C. ITEM CALIBRATION RESULTS

TABLE C.1 Year 3 G&P Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
lc3q26	-2.146	0.032	0.35	90.93	0.96	0.92	1.08	-1.0	1.04
lc3q27	-2.094	0.032	0.41	90.52	0.91	0.92	1.08	-2.2	1.10
lc3q28	-1.614	0.030	0.45	86.05	0.91	0.94	1.06	-3.1	1.12
lc3q29	-1.459	0.030	0.37	84.33	0.99	0.95	1.05	-0.5	1.03
lc3q30	-1.242	0.029	0.42	81.62	0.95	0.95	1.05	-2.1	1.07
lc3q31	-0.054	0.026	0.47	61.43	0.97	0.97	1.03	-2.2	1.10
lc3q32	-1.417	0.030	0.44	83.85	0.93	0.95	1.05	-2.8	1.11
lc3q33	-0.752	0.028	0.45	74.37	0.96	0.96	1.04	-2.2	1.08
lc3q34	-0.554	0.027	0.46	71.01	0.97	0.97	1.03	-1.9	1.10
lc3q35	-0.273	0.026	0.49	65.83	0.95	0.97	1.03	-3.6	1.17
lc3q36	-0.347	0.027	0.55	67.25	0.89	0.97	1.03	-7.6	1.32
lc3q37	-0.030	0.026	0.46	61.08	0.98	0.97	1.03	-1.5	1.09
lc3q38	0.554	0.026	0.53	48.97	0.92	0.98	1.02	-6.8	1.32
lc3q39	-0.003	0.026	0.49	60.57	0.96	0.97	1.03	-2.8	1.15
lc3q40	-0.033	0.026	0.38	61.23	1.05	0.97	1.03	3.5	0.86
lc3q41	0.230	0.026	0.53	55.94	0.93	0.98	1.02	-6.0	1.29
lc3q42	0.406	0.026	0.47	52.31	0.98	0.98	1.02	-1.9	1.11
lc3q43	0.653	0.026	0.40	47.15	1.03	0.98	1.02	2.6	0.88
lc3q44	0.946	0.026	0.30	41.09	1.10	0.97	1.03	7.4	0.63
lc3q45	0.797	0.026	0.39	44.25	1.04	0.98	1.02	2.9	0.86
lc3q46	0.684	0.026	0.38	46.66	1.05	0.98	1.02	3.7	0.84
lc3q47	1.607	0.027	0.32	28.57	1.06	0.97	1.03	3.2	0.83
lc3q48	1.033	0.026	0.35	39.53	1.06	0.97	1.03	4.7	0.78
lc3q49	1.508	0.027	0.15	30.45	1.20	0.97	1.03	11.8	0.42
lc3q50	1.784	0.028	0.25	25.72	1.08	0.96	1.04	4.0	0.77
lc3q51	1.815	0.138	0.25	25.23	1.09	0.96	1.04	4.5	0.75

TABLE C.2 Year 3 Numeracy Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
n3q01	-2.797	0.047	0.37	92.04	0.92	0.91	1.09	-1.8	1.08
n3q02	-2.253	0.042	0.41	87.68	0.92	0.94	1.06	-2.3	1.09
n3q03	-1.959	0.040	0.35	84.64	1.02	0.94	1.06	0.6	0.99
n3q04	-2.660	0.046	0.31	91.10	0.98	0.92	1.08	-0.4	1.01
n3q05	-2.089	0.041	0.32	86.06	1.02	0.94	1.06	0.6	0.96
n3q06	-1.707	0.038	0.51	81.62	0.87	0.95	1.05	-5.3	1.19
n3q07	-0.894	0.034	0.46	69.27	0.99	0.97	1.03	-0.5	1.04
n3q08	-2.251	0.042	0.47	87.67	0.87	0.94	1.06	-4.1	1.15
n3q09	-1.668	0.038	0.54	81.11	0.85	0.95	1.05	-6.7	1.24
n3q10	-1.031	0.034	0.51	71.62	0.93	0.96	1.04	-3.9	1.16
n3q11	-0.857	0.033	0.51	68.63	0.94	0.97	1.03	-3.5	1.15
n3q12	-0.704	0.033	0.53	65.88	0.93	0.97	1.03	-4.5	1.19
n3q13	-0.450	0.032	0.49	61.12	0.98	0.97	1.03	-1.1	1.07
n3q14	-0.522	0.032	0.46	62.52	1.01	0.97	1.03	0.6	1.00
n3q15	-0.566	0.033	0.46	63.34	1.01	0.97	1.03	0.9	0.98
n3q16	-0.050	0.032	0.59	53.29	0.88	0.97	1.03	-9.1	1.38
n3q17	0.009	0.032	0.57	52.12	0.91	0.97	1.03	-7.1	1.30
n3q18	-0.202	0.032	0.51	56.30	0.97	0.97	1.03	-2.5	1.13
n3q19	-0.209	0.032	0.48	56.46	1.00	0.97	1.03	-0.2	1.03
n3q20	-0.013	0.032	0.44	52.60	1.04	0.97	1.03	2.7	0.90
n3q21	0.219	0.032	0.46	47.97	1.02	0.97	1.03	1.4	0.95
n3q22	0.585	0.032	0.41	40.76	1.05	0.97	1.03	3.4	0.83
n3q23	0.546	0.032	0.42	41.51	1.06	0.97	1.03	4.0	0.83
n3q24	0.556	0.032	0.32	41.34	1.15	0.97	1.03	9.9	0.55
n3q25	0.670	0.032	0.44	39.13	1.02	0.97	1.03	1.3	0.92
n3q26	0.998	0.033	0.34	33.03	1.11	0.97	1.03	6.5	0.71
n3q27	0.964	0.033	0.18	33.68	1.27	0.97	1.03	15.8	0.26
n3q28	2.159	0.040	0.50	15.92	0.87	0.95	1.05	-5.1	1.18
n3q29	1.091	0.034	0.37	31.45	1.07	0.97	1.03	4.1	0.78
n3q30	1.437	0.035	0.26	25.74	1.17	0.96	1.04	8.4	0.63
n3q31	0.370	0.032	0.37	45.08	1.12	0.97	1.03	8.2	0.63
n3q32	2.484	0.042	0.47	12.60	0.87	0.94	1.06	-4.0	1.16
n3q33	3.675	0.055	0.21	4.78	1.02	0.87	1.13	0.4	0.97
n3q34	3.459	0.052	0.31	5.77	0.99	0.89	1.11	-0.2	1.03
n3q35	3.660	0.216	0.33	4.86	0.96	0.87	1.13	-0.7	1.09

TABLE C.3 Year 3 Reading Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
r3q01	-2.479	0.035	0.39	90.67	0.90	0.92	1.08	-2.6	1.10
r3q02	-2.165	0.033	0.36	88.02	0.96	0.93	1.07	-1.2	1.04
r3q03	-2.214	0.033	0.46	88.47	0.86	0.93	1.07	-4.2	1.16
r3q04	-1.582	0.031	0.51	81.57	0.87	0.95	1.05	-5.7	1.21
r3q05	-2.030	0.033	0.48	86.72	0.86	0.94	1.06	-4.9	1.18
r3q06	-0.868	0.029	0.56	70.94	0.86	0.97	1.03	-8.1	1.29
r3q07	-1.258	0.030	0.51	77.14	0.90	0.96	1.04	-5.2	1.19
r3q08	-1.206	0.030	0.54	76.37	0.86	0.96	1.04	-7.0	1.25
r3q09	-0.108	0.027	0.49	56.93	0.99	0.97	1.03	-0.8	1.04
r3q10	-0.616	0.028	0.54	66.55	0.92	0.97	1.03	-5.3	1.21
r3q11	-0.344	0.028	0.54	61.49	0.92	0.97	1.03	-5.5	1.22
r3q12	0.510	0.027	0.41	44.69	1.06	0.97	1.03	4.4	0.80
r3q13	1.076	0.028	0.46	33.95	1.00	0.97	1.03	-0.2	0.99
r3q14	0.802	0.028	0.33	39.09	1.15	0.97	1.03	9.9	0.59
r3q15	0.019	0.027	0.45	54.50	1.03	0.97	1.03	2.1	0.93
r3q16	-0.972	0.029	0.45	72.82	1.00	0.96	1.04	-0.2	1.04
r3q17	0.126	0.027	0.42	52.42	1.06	0.97	1.03	4.6	0.84
r3q18	0.819	0.028	0.38	38.80	1.09	0.97	1.03	5.7	0.75
r3q19	-1.074	0.029	0.50	74.48	0.93	0.96	1.04	-3.7	1.16
r3q20	1.720	0.030	0.32	23.45	1.06	0.96	1.04	3.0	0.82
r3q21	-0.467	0.028	0.55	64.03	0.91	0.97	1.03	-6.1	1.26
r3q22	-0.283	0.028	0.53	60.57	0.94	0.97	1.03	-4.5	1.20
r3q23	-1.143	0.030	0.50	75.64	0.91	0.96	1.04	-4.4	1.16
r3q24	0.504	0.027	0.50	45.07	0.97	0.97	1.03	-2.1	1.07
r3q25	0.310	0.027	0.41	48.94	1.07	0.97	1.03	5.0	0.80
r3q26	2.033	0.031	0.05	19.19	1.28	0.95	1.05	10.8	0.46
r3q27	0.715	0.028	0.43	41.06	1.04	0.97	1.03	2.9	0.87
r3q28	0.264	0.028	0.46	49.98	1.01	0.97	1.03	0.9	0.96
r3q29	1.716	0.030	0.29	23.70	1.10	0.96	1.04	4.6	0.77
r3q30	1.841	0.030	0.28	21.90	1.08	0.96	1.04	3.7	0.77
r3q31	1.554	0.029	0.54	26.23	0.88	0.96	1.04	-6.7	1.22
r3q32	0.226	0.028	0.51	50.91	0.96	0.97	1.03	-2.7	1.11
r3q33	0.828	0.028	0.51	39.15	0.95	0.97	1.03	-3.5	1.11
r3q34	1.142	0.029	0.55	33.36	0.90	0.97	1.03	-5.9	1.20
r3q35	0.615	0.028	0.24	43.35	1.27	0.97	1.03	16.9	0.26
r3q36	1.988	0.172	0.25	20.16	1.13	0.95	1.05	5.2	0.73

TABLE C.4 Year 3 Spelling Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
lc3q01	-4.309	0.049	0.43	92.54	0.88	0.91	1.09	-2.7	1.07
lc3q02	-3.558	0.045	0.46	88.51	1.02	0.93	1.07	0.6	0.90
lc3q03	-3.382	0.044	0.49	87.38	1.00	0.93	1.07	-0.1	0.95
lc3q04	-2.212	0.040	0.59	77.75	1.03	0.94	1.06	1.1	0.95
lc3q05	-1.668	0.038	0.62	72.32	1.01	0.95	1.05	0.3	0.97
lc3q06	-1.392	0.037	0.63	69.20	1.00	0.95	1.05	0.1	0.97
lc3q07	-1.343	0.037	0.67	68.64	0.92	0.95	1.05	-3.3	1.12
lc3q08	-1.113	0.037	0.65	65.90	1.04	0.95	1.05	1.6	0.97
lc3q09	-0.877	0.036	0.69	62.97	0.93	0.96	1.04	-3.2	1.12
lc3q10	0.010	0.035	0.62	51.12	1.16	0.96	1.04	7.3	0.75
lc3q11	0.548	0.035	0.69	43.63	0.96	0.96	1.04	-1.9	1.08
lc3q12	1.648	0.037	0.65	29.05	0.91	0.96	1.04	-4.0	1.14
lc3q13	2.036	0.038	0.56	24.53	1.06	0.95	1.05	2.6	0.90
lc3q14	1.807	0.037	0.56	27.23	1.09	0.95	1.05	3.9	0.83
lc3q15	-0.590	0.036	0.65	59.71	1.04	0.96	1.04	1.8	0.96
lc3q16	0.034	0.035	0.68	51.44	0.99	0.96	1.04	-0.5	1.06
lc3q17	-0.022	0.035	0.62	52.51	1.12	0.96	1.04	5.7	0.82
lc3q18	1.021	0.036	0.70	37.98	0.87	0.96	1.04	-6.3	1.24
lc3q19	0.788	0.036	0.64	41.37	1.04	0.96	1.04	2.0	0.96
lc3q20	0.772	0.036	0.68	41.90	0.96	0.96	1.04	-2.1	1.10
lc3q21	1.206	0.036	0.67	36.11	0.93	0.96	1.04	-3.3	1.15
lc3q22	1.478	0.037	0.64	32.66	0.95	0.96	1.04	-2.2	1.07
lc3q23	2.342	0.039	0.58	22.48	0.95	0.95	1.05	-2.0	1.08
lc3q24	2.877	0.042	0.50	17.31	1.03	0.94	1.06	1.2	0.93
lc3q25	3.898	0.187	0.42	9.68	1.00	0.92	1.08	0.1	0.98

TABLE C.5 Year 5 G&P Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
lc5q26	-3.241	0.041	0.34	97.00	0.91	0.85	1.15	-1.2	1.10
lc5q27	-1.687	0.034	0.45	88.59	0.91	0.93	1.07	-2.9	1.10
lc5q28	-0.866	0.030	0.45	79.31	0.98	0.96	1.04	-0.9	1.04
lc5q29	0.106	0.028	0.51	63.25	0.98	0.97	1.03	-1.7	1.10
lc5q30	-2.368	0.037	0.43	93.48	0.87	0.90	1.10	-2.9	1.14
lc5q31	-1.418	0.033	0.31	86.02	1.05	0.94	1.06	1.8	0.92
lc5q32	-1.444	0.033	0.37	86.28	1.00	0.94	1.06	-0.1	0.99
lc5q33	-1.052	0.031	0.51	81.81	0.90	0.95	1.05	-4.3	1.16
lc5q34	-0.644	0.029	0.49	76.22	0.95	0.96	1.04	-2.8	1.11
lc5q35	-0.942	0.031	0.40	80.51	1.01	0.95	1.05	0.4	1.00
lc5q36	-0.456	0.029	0.53	73.32	0.92	0.96	1.04	-4.4	1.17
lc5q37	-0.033	0.028	0.45	66.00	1.03	0.97	1.03	1.7	0.94
lc5q38	-0.298	0.028	0.58	70.75	0.88	0.97	1.03	-7.5	1.28
lc5q39	0.050	0.028	0.52	64.56	0.95	0.97	1.03	-3.2	1.15
lc5q40	0.117	0.028	0.47	63.31	1.00	0.97	1.03	0.2	0.99
lc5q41	0.468	0.027	0.47	56.53	1.02	0.97	1.03	1.5	0.98
lc5q42	0.287	0.027	0.51	60.19	0.97	0.97	1.03	-1.9	1.11
lc5q43	1.112	0.027	0.35	43.77	1.11	0.97	1.03	8.4	0.60
lc5q44	0.496	0.027	0.53	56.17	0.94	0.97	1.03	-4.3	1.20
lc5q45	0.930	0.027	0.50	47.51	0.97	0.97	1.03	-2.2	1.09
lc5q46	1.264	0.027	0.42	40.89	1.04	0.97	1.03	3.2	0.86
lc5q47	1.403	0.028	0.32	38.21	1.14	0.97	1.03	9.6	0.59
lc5q48	1.783	0.028	0.39	31.24	1.04	0.97	1.03	2.5	0.88
lc5q49	1.599	0.028	0.31	34.63	1.12	0.97	1.03	7.9	0.63
lc5q50	1.900	0.029	0.31	29.29	1.11	0.97	1.03	6.1	0.71
lc5q51	2.933	0.149	0.33	14.80	1.00	0.94	1.06	-0.1	0.96

TABLE C.6 Year 5 Numeracy Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
n5q01	-3.420	0.048	0.25	95.04	0.97	0.89	1.11	-0.6	1.03
n5q02	-2.500	0.040	0.27	89.14	1.02	0.93	1.07	0.4	0.97
n5q03	-1.741	0.035	0.47	80.81	0.90	0.95	1.05	-4.6	1.17
n5q04	-1.792	0.035	0.45	81.48	0.92	0.95	1.05	-3.6	1.13
n5q05	-1.787	0.035	0.38	81.41	0.98	0.95	1.05	-0.8	1.02
n5q06	-1.461	0.033	0.52	76.84	0.88	0.96	1.04	-6.4	1.23
n5q07	-1.673	0.034	0.48	79.90	0.90	0.96	1.04	-4.7	1.16
n5q08	-1.018	0.031	0.57	69.63	0.86	0.97	1.03	-9.2	1.33
n5q09	-1.561	0.034	0.43	78.32	0.97	0.96	1.04	-1.6	1.07
n5q10	-0.858	0.031	0.55	66.78	0.88	0.97	1.03	-8.2	1.31
n5q11	-1.014	0.031	0.43	69.56	1.01	0.97	1.03	0.8	1.00
n5q12	-0.708	0.031	0.45	63.99	1.00	0.97	1.03	-0.3	1.01
n5q13	-1.311	0.033	0.39	74.53	1.02	0.96	1.04	1.0	0.96
n5q14	-0.229	0.030	0.39	54.69	1.08	0.97	1.03	6.2	0.75
n5q15	-0.678	0.030	0.51	63.45	0.94	0.97	1.03	-4.4	1.19
n5q16	-0.468	0.030	0.47	59.42	0.99	0.97	1.03	-0.8	1.06
n5q17	-0.446	0.030	0.39	58.99	1.08	0.97	1.03	5.5	0.80
n5q18	0.075	0.030	0.42	48.58	1.06	0.97	1.03	4.3	0.83
n5q19	0.237	0.030	0.41	45.35	1.07	0.97	1.03	5.0	0.80
n5q20	0.000	0.030	0.55	50.09	0.91	0.97	1.03	-7.0	1.29
n5q21	-0.348	0.030	0.44	57.06	1.02	0.97	1.03	1.5	0.94
n5q22	0.555	0.030	0.49	39.12	0.97	0.97	1.03	-2.0	1.07
n5q23	0.438	0.030	0.49	41.39	0.97	0.97	1.03	-1.9	1.07
n5q24	0.180	0.030	0.35	46.49	1.13	0.97	1.03	9.5	0.60
n5q25	0.267	0.030	0.32	44.76	1.15	0.97	1.03	11.1	0.51
n5q26	0.082	0.030	0.63	48.45	0.83	0.97	1.03	14.4	1.53
n5q27	0.382	0.030	0.40	42.50	1.07	0.97	1.03	4.8	0.80
n5q28	0.559	0.030	0.39	39.06	1.07	0.97	1.03	5.2	0.78
n5q29	0.298	0.030	0.36	44.16	1.11	0.97	1.03	7.8	0.66
n5q30	0.494	0.030	0.33	40.37	1.14	0.97	1.03	9.4	0.60
n5q31	0.636	0.031	0.33	37.66	1.12	0.97	1.03	8.3	0.64
n5q32	1.296	0.033	0.34	26.13	1.06	0.96	1.04	3.4	0.83
n5q33	0.864	0.031	0.36	33.45	1.08	0.97	1.03	5.3	0.76
n5q34	1.369	0.033	0.48	24.98	0.94	0.96	1.04	-3.0	1.08
n5q35	1.304	0.033	0.48	26.02	0.95	0.96	1.04	-2.7	1.08
n5q36	2.316	0.039	0.43	13.10	0.91	0.94	1.06	-2.9	1.08
n5q37	2.264	0.038	0.44	13.62	0.93	0.94	1.06	-2.5	1.08
n5q38	2.627	0.041	0.34	10.34	0.99	0.93	1.07	-0.3	1.00
n5q39	3.559	0.049	0.33	4.78	0.97	0.88	1.12	-0.5	1.07
n5q40	3.209	0.209	0.40	6.46	0.92	0.90	1.10	-1.6	1.11

TABLE C.7 Year 5 Reading Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
r5q01	-2.073	0.030	0.39	89.90	0.93	0.93	1.07	-2.1	1.06
r5q02	-0.942	0.026	0.41	77.10	1.01	0.96	1.04	0.3	0.97
r5q03	-1.770	0.029	0.45	87.24	0.89	0.94	1.06	-3.8	1.13
r5q04	-0.967	0.027	0.44	77.52	0.98	0.96	1.04	-0.8	1.03
r5q05	-1.929	0.029	0.28	88.74	1.04	0.93	1.07	1.2	0.94
r5q06	0.245	0.025	0.35	56.46	1.14	0.97	1.03	9.7	0.60
r5q07	-2.221	0.030	0.43	91.16	0.87	0.92	1.08	-3.4	1.13
r5q08	0.891	0.025	0.46	43.80	1.02	0.97	1.03	1.4	0.93
r5q09	-1.788	0.029	0.47	87.56	0.87	0.94	1.06	-4.2	1.15
r5q10	-1.531	0.028	0.52	84.95	0.85	0.95	1.05	-5.9	1.20
r5q11	-2.064	0.030	0.37	90.02	0.94	0.93	1.07	-1.7	1.06
r5q12	-0.769	0.026	0.53	74.77	0.89	0.96	1.04	-5.9	1.21
r5q13	-0.442	0.026	0.42	69.38	1.03	0.97	1.03	1.8	0.95
r5q14	1.752	0.026	0.32	28.19	1.10	0.97	1.03	5.8	0.72
r5q15	-0.219	0.025	0.49	65.43	0.98	0.97	1.03	-1.3	1.06
r5q16	-0.528	0.026	0.49	70.88	0.95	0.97	1.03	-3.0	1.10
r5q17	1.274	0.025	0.48	36.59	0.97	0.97	1.03	-1.8	1.04
r5q18	0.956	0.025	0.52	42.65	0.95	0.97	1.03	-4.0	1.14
r5q19	-0.443	0.026	0.34	69.48	1.11	0.97	1.03	6.6	0.75
r5q20	0.724	0.025	0.42	47.24	1.07	0.97	1.03	5.0	0.81
r5q21	1.110	0.025	0.32	39.73	1.17	0.97	1.03	11.3	0.55
r5q22	0.346	0.025	0.47	54.74	1.02	0.97	1.03	1.3	0.96
r5q23	-0.546	0.026	0.41	71.28	1.04	0.97	1.03	2.3	0.93
r5q24	-0.154	0.025	0.50	64.34	0.97	0.97	1.03	-2.2	1.10
r5q25	-0.891	0.026	0.55	76.75	0.86	0.96	1.04	-7.3	1.25
r5q26	0.697	0.025	0.42	47.84	1.07	0.97	1.03	4.9	0.80
r5q27	-0.385	0.025	0.56	68.57	0.89	0.97	1.03	-6.8	1.26
r5q28	1.397	0.025	0.49	34.45	0.94	0.97	1.03	-3.8	1.10
r5q29	0.888	0.025	0.53	44.10	0.94	0.97	1.03	-4.6	1.17
r5q30	1.840	0.026	0.35	26.88	1.08	0.96	1.04	4.2	0.81
r5q31	0.705	0.025	0.51	47.71	0.96	0.97	1.03	-2.9	1.11
r5q32	1.150	0.025	0.52	39.05	0.93	0.97	1.03	-4.7	1.14
r5q33	1.109	0.025	0.26	39.87	1.23	0.97	1.03	15.3	0.37
r5q34	1.776	0.026	0.50	27.98	0.93	0.97	1.03	-3.9	1.12
r5q35	1.526	0.026	0.39	32.23	1.04	0.97	1.03	2.6	0.85
r5q36	-0.285	0.025	0.55	66.96	0.91	0.97	1.03	-6.2	1.25
r5q37	1.562	0.157	0.34	31.72	1.07	0.97	1.03	4.1	0.76

TABLE C.8 Year 5 Spelling Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
lc5q01	-4.367	0.046	0.39	93.65	0.90	0.91	1.09	-2.0	0.87
lc5q02	-2.118	0.037	0.61	78.12	0.93	0.95	1.05	-2.9	1.07
lc5q03	-1.641	0.035	0.55	72.99	1.15	0.95	1.05	6.2	0.76
lc5q04	-1.895	0.036	0.58	75.99	1.05	0.95	1.05	1.8	0.93
lc5q05	-1.208	0.034	0.61	67.87	1.06	0.96	1.04	2.9	0.90
lc5q06	-0.579	0.033	0.66	59.40	0.99	0.96	1.04	-0.3	1.04
lc5q07	-0.728	0.033	0.59	61.58	1.14	0.96	1.04	6.7	0.79
lc5q08	-0.576	0.033	0.65	59.47	1.01	0.96	1.04	0.4	1.01
lc5q09	0.463	0.033	0.60	44.35	1.13	0.96	1.04	6.4	0.81
lc5q10	0.428	0.033	0.65	44.90	1.03	0.96	1.04	1.4	0.99
lc5q11	1.452	0.034	0.62	30.79	0.96	0.96	1.04	-1.7	1.05
lc5q12	2.906	0.039	0.50	15.26	0.99	0.94	1.06	-0.4	0.98
lc5q13	-2.082	0.037	0.60	78.61	0.93	0.95	1.05	-2.6	1.08
lc5q14	-0.959	0.034	0.69	65.24	0.88	0.96	1.04	-5.9	1.21
lc5q15	-0.437	0.033	0.64	58.04	1.02	0.96	1.04	1.2	1.00
lc5q16	-0.393	0.033	0.65	57.57	1.01	0.96	1.04	0.4	1.03
lc5q17	-0.202	0.033	0.69	54.91	0.92	0.96	1.04	-4.1	1.18
lc5q18	0.403	0.033	0.66	46.02	0.99	0.96	1.04	-0.6	1.07
lc5q19	0.404	0.033	0.69	46.10	0.92	0.96	1.04	-4.5	1.19
lc5q20	0.383	0.033	0.64	46.68	1.03	0.96	1.04	1.7	0.98
lc5q21	1.718	0.035	0.60	28.31	0.98	0.96	1.04	-0.9	1.02
lc5q22	1.785	0.035	0.60	27.64	0.97	0.96	1.04	-1.3	1.04
lc5q23	1.490	0.034	0.64	31.59	0.91	0.96	1.04	-4.2	1.14
lc5q24	2.242	0.037	0.54	22.66	1.02	0.95	1.05	0.8	0.96
lc5q25	3.512	0.171	0.44	11.50	1.02	0.93	1.07	0.6	0.94

TABLE C.9 Year 7 G&P Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
lc7q31	-2.265	0.032	0.32	92.16	0.96	0.92	1.08	-0.8	1.02
lc7q32	-2.315	0.032	0.43	92.49	0.89	0.91	1.09	-2.6	1.12
lc7q33	-1.834	0.030	0.46	88.80	0.89	0.93	1.07	-3.4	1.13
lc7q34	-2.265	0.032	0.32	92.17	0.96	0.92	1.08	-1.0	1.03
lc7q35	-1.545	0.029	0.42	85.97	0.93	0.94	1.06	-2.7	1.08
lc7q36	-1.069	0.027	0.38	80.09	1.00	0.96	1.04	0.1	1.00
lc7q37	-1.124	0.028	0.44	80.88	0.94	0.96	1.04	-2.7	1.08
lc7q38	-0.980	0.027	0.47	78.85	0.92	0.96	1.04	-3.7	1.13
lc7q39	0.091	0.025	0.41	59.83	1.02	0.98	1.02	1.6	0.95
lc7q40	-0.220	0.025	0.46	65.99	0.97	0.97	1.03	-1.9	1.09
lc7q41	-0.488	0.026	0.53	70.93	0.90	0.97	1.03	-6.3	1.24
lc7q42	-0.309	0.025	0.48	67.70	0.96	0.97	1.03	-2.9	1.13
lc7q43	-0.279	0.025	0.46	67.16	0.97	0.97	1.03	-1.9	1.10
lc7q44	-0.682	0.026	0.51	74.31	0.92	0.97	1.03	-4.9	1.19
lc7q45	0.714	0.024	0.41	46.90	1.02	0.98	1.02	1.9	0.92
lc7q46	0.651	0.024	0.30	48.24	1.12	0.98	1.02	10.4	0.53
lc7q47	0.568	0.024	0.52	50.01	0.93	0.98	1.02	-6.2	1.30
lc7q48	0.131	0.025	0.46	59.17	0.99	0.98	1.02	-1.2	1.09
lc7q49	0.803	0.025	0.38	45.08	1.04	0.98	1.02	4.0	0.82
lc7q50	0.350	0.025	0.42	54.64	1.02	0.98	1.02	1.8	0.95
lc7q51	0.907	0.025	0.43	42.94	1.00	0.98	1.02	-0.4	1.02
lc7q52	1.065	0.025	0.34	39.72	1.07	0.98	1.02	6.0	0.75
lc7q53	1.244	0.025	0.43	36.16	0.98	0.98	1.02	-1.6	1.06
lc7q54	1.559	0.026	0.31	30.19	1.07	0.97	1.03	4.9	0.79
lc7q55	1.465	0.025	0.33	31.93	1.05	0.97	1.03	3.4	0.83
lc7q56	1.592	0.026	0.36	29.62	1.02	0.97	1.03	1.5	0.93
lc7q57	2.029	0.027	0.25	22.40	1.06	0.96	1.04	3.2	0.82
lc7q58	2.207	0.138	0.09	19.80	1.17	0.96	1.04	7.6	0.62

TABLE C.10 Year 7 Numeracy Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
n7CAq01	-1.751	0.033	0.42	77.85	0.94	0.96	1.04	-2.9	1.10
n7CAq02	-2.054	0.035	0.40	82.02	0.95	0.95	1.05	-2.4	1.09
n7CAq03	-1.187	0.031	0.35	68.66	1.06	0.97	1.03	4.1	0.83
n7CAq04	-1.238	0.031	0.38	69.57	1.04	0.97	1.03	2.4	0.93
n7CAq05	-1.640	0.033	0.40	76.19	0.98	0.96	1.04	-1.3	1.06
n7CAq06	-1.276	0.031	0.35	70.24	1.04	0.97	1.03	2.8	0.87
n7CAq07	-0.854	0.030	0.43	62.52	1.02	0.97	1.03	1.6	0.97
n7CAq08	-1.222	0.031	0.33	69.30	1.10	0.97	1.03	6.2	0.80
n7CAq09	-0.784	0.030	0.51	61.19	0.93	0.97	1.03	-5.9	1.24
n7CAq10	-0.985	0.030	0.39	65.01	1.05	0.97	1.03	3.6	0.90
n7CAq11	-0.743	0.030	0.31	60.41	1.15	0.97	1.03	10.7	0.56
n7CAq12	-0.931	0.030	0.51	63.99	0.93	0.97	1.03	-5.5	1.22
n7CAq13	-0.303	0.029	0.52	51.73	0.93	0.98	1.02	-5.3	1.18
n7CAq14	-0.587	0.030	0.53	57.38	0.91	0.98	1.02	-7.2	1.27
n7CAq15	-0.010	0.030	0.42	45.90	1.05	0.97	1.03	3.8	0.86
n7CAq16	-0.415	0.029	0.36	53.97	1.11	0.98	1.02	8.2	0.68
n7CAq17	0.101	0.030	0.47	43.72	1.00	0.97	1.03	0.0	0.98
n7CAq18	0.375	0.030	0.51	38.47	0.95	0.97	1.03	-3.3	1.10
n7CAq19	0.235	0.030	0.30	41.16	1.19	0.97	1.03	13.0	0.48
n7CAq20	0.349	0.030	0.43	38.98	1.03	0.97	1.03	2.4	0.88
n7CAq21	0.460	0.030	0.40	36.91	1.07	0.97	1.03	4.5	0.82
n7CAq22	0.208	0.030	0.27	41.73	1.21	0.97	1.03	14.7	0.42
n7CAq23	0.640	0.031	0.44	33.70	1.01	0.97	1.03	0.6	0.95
n7CAq24	1.029	0.032	0.52	27.16	0.91	0.96	1.04	-5.0	1.13
n7CAq25	0.980	0.032	0.57	28.02	0.85	0.97	1.03	-8.9	1.24
n7CAq26	1.497	0.035	0.54	20.49	0.87	0.96	1.04	-6.1	1.17
n7CAq27	1.777	0.037	0.50	17.03	0.89	0.95	1.05	-4.3	1.12
n7CAq28	2.017	0.038	0.33	14.43	1.05	0.94	1.06	1.7	0.92
n7CAq29	1.815	0.037	0.51	16.59	0.88	0.95	1.05	-4.6	1.13
n7CAq30	2.571	0.043	0.31	9.59	1.07	0.92	1.08	1.8	0.93
n7CAq31	2.173	0.040	0.33	12.92	1.02	0.94	1.06	0.6	0.94
n7CAq32	2.406	0.043	0.49	10.91	0.87	0.93	1.07	-3.8	1.13

(table continues)

TABLE C.10 (continued)

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
n7NCq01	-3.647	0.049	0.21	95.13	0.97	0.89	1.11	-0.5	1.02
n7NCq02	-3.378	0.046	0.19	93.80	1.00	0.90	1.10	0.0	0.98
n7NCq03	-2.072	0.035	0.39	82.29	0.93	0.95	1.05	-3.2	1.09
n7NCq04	-2.309	0.037	0.42	85.12	0.89	0.95	1.05	-4.2	1.15
n7NCq05	-1.507	0.032	0.53	74.14	0.85	0.97	1.03	-9.4	1.31
n7NCq06	-1.773	0.033	0.29	78.23	1.06	0.96	1.04	3.0	0.86
n7NCq07	-1.393	0.032	0.42	72.28	0.97	0.97	1.03	-2.0	1.06
n7NCq08	-0.812	0.030	0.52	61.79	0.91	0.97	1.03	-7.2	1.27
n7NCq09	-0.545	0.030	0.38	56.57	1.08	0.98	1.02	6.1	0.73
n7NCq10	-0.827	0.030	0.46	62.08	0.97	0.97	1.03	-2.3	1.08
n7NCq11	-0.810	0.030	0.39	61.76	1.06	0.97	1.03	4.2	0.85
n7NCq12	-0.799	0.030	0.41	61.56	1.03	0.97	1.03	2.0	0.92
n7NCq13	-0.092	0.030	0.41	47.58	1.06	0.98	1.02	4.3	0.83
n7NCq14	-0.639	0.030	0.48	58.44	0.96	0.97	1.03	-2.9	1.12
n7NCq15	-0.219	0.029	0.43	50.12	1.04	0.98	1.02	3.0	0.87
n7NCq16	0.320	0.030	0.62	39.56	0.82	0.97	1.03	13.6	1.41
n7NCq17	-0.083	0.030	0.50	47.42	0.96	0.97	1.03	-3.5	1.12
n7NCq18	0.066	0.030	0.58	44.47	0.87	0.97	1.03	10.7	1.37
n7NCq19	-0.025	0.030	0.55	46.26	0.90	0.97	1.03	-7.7	1.27
n7NCq20	0.105	0.030	0.31	43.71	1.17	0.97	1.03	12.5	0.51
n7NCq21	-0.059	0.030	0.39	46.94	1.08	0.97	1.03	6.1	0.77
n7NCq22	0.651	0.031	0.23	33.48	1.25	0.97	1.03	14.8	0.43
n7NCq23	0.247	0.030	0.49	40.98	0.98	0.97	1.03	-1.8	1.07
n7NCq24	1.368	0.034	0.51	22.11	0.91	0.96	1.04	-4.2	1.11
n7NCq25	0.644	0.031	0.41	33.64	1.04	0.97	1.03	2.6	0.88
n7NCq26	0.963	0.032	0.46	28.22	0.98	0.97	1.03	-1.3	1.01
n7NCq27	2.476	0.042	0.28	10.20	1.04	0.93	1.07	1.2	0.92
n7NCq28	1.969	0.038	0.52	14.82	0.86	0.95	1.05	-5.2	1.15
n7NCq29	2.156	0.039	0.33	12.97	1.02	0.94	1.06	0.5	0.94
n7NCq30	1.442	0.034	0.53	21.17	0.88	0.96	1.04	-5.9	1.15
n7NCq31	2.627	0.043	0.44	9.22	0.90	0.92	1.08	-2.5	1.10
n7NCq32	3.297	0.264	0.36	5.38	0.97	0.89	1.11	-0.5	1.06

TABLE C.11 Year 7 Reading Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnS	CI_L	CI_H	T	Slope
r7q01	-2.248	0.029	0.21	90.62	1.03	0.93	1.07	0.8	0.95
r7q02	-1.159	0.025	0.48	78.36	0.91	0.96	1.04	-4.5	1.15
r7q03	-1.997	0.028	0.46	88.46	0.88	0.94	1.06	-4.0	1.14
r7q04	-2.309	0.029	0.48	91.09	0.84	0.92	1.08	-4.4	1.17
r7q05	-1.970	0.028	0.51	88.23	0.83	0.94	1.06	-5.8	1.19
r7q06	2.132	0.026	-0.02	17.45	1.20	0.95	1.05	7.9	0.60
r7q07	-1.174	0.025	0.35	78.60	1.01	0.96	1.04	0.4	0.99
r7q08	-0.330	0.024	0.37	63.88	1.04	0.97	1.03	2.7	0.90
r7q09	0.535	0.023	0.28	45.88	1.11	0.98	1.02	9.8	0.57
r7q10	-0.639	0.024	0.45	69.79	0.96	0.97	1.03	-2.9	1.11
r7q11	-1.287	0.026	0.36	80.27	0.99	0.96	1.04	-0.5	1.01
r7q12	-0.875	0.025	0.46	73.92	0.94	0.97	1.03	-3.8	1.13
r7q13	-1.987	0.028	0.47	88.42	0.85	0.94	1.06	-4.8	1.16
r7q14	-0.239	0.024	0.42	62.13	0.99	0.98	1.02	-1.0	1.05
r7q15	-1.734	0.027	0.51	85.87	0.84	0.94	1.06	-5.8	1.19
r7q16	0.120	0.023	0.55	54.73	0.88	0.98	1.02	11.0	1.44
r7q17	-0.628	0.024	0.57	69.63	0.85	0.97	1.03	10.6	1.36
r7q18	0.829	0.023	0.34	39.82	1.06	0.98	1.02	4.8	0.80
r7q19	-0.625	0.024	0.54	69.60	0.88	0.97	1.03	-8.6	1.31
r7q20	-0.020	0.023	0.57	57.68	0.86	0.98	1.02	12.8	1.49
r7q21	-0.444	0.024	0.44	66.19	0.97	0.97	1.03	-2.1	1.09
r7q22	-0.062	0.023	0.35	58.57	1.05	0.98	1.02	4.4	0.81
r7q23	-0.186	0.024	0.53	61.11	0.89	0.98	1.02	-9.0	1.36
r7q24	-0.241	0.024	0.41	62.23	1.00	0.98	1.02	-0.3	1.01
r7q25	-0.132	0.024	0.23	60.02	1.16	0.98	1.02	12.3	0.50
r7q26	-1.140	0.025	0.44	78.23	0.93	0.96	1.04	-3.4	1.12
r7q27	1.409	0.024	0.49	28.66	0.90	0.97	1.03	-6.7	1.24
r7q28	1.811	0.025	0.14	22.03	1.14	0.96	1.04	7.1	0.70
r7q29	0.205	0.023	0.52	53.01	0.91	0.98	1.02	-8.7	1.37
r7q30	0.833	0.024	0.30	39.80	1.08	0.98	1.02	6.4	0.72
r7q31	0.392	0.023	0.23	49.05	1.15	0.98	1.02	13.3	0.40
r7q32	-0.574	0.024	0.42	68.73	0.97	0.97	1.03	-2.0	1.07
r7q33	1.323	0.024	0.37	30.26	0.99	0.97	1.03	-0.8	0.99
r7q34	0.465	0.023	0.40	47.53	1.01	0.98	1.02	0.5	0.99
r7q35	-1.068	0.025	0.46	77.21	0.92	0.96	1.04	-4.0	1.14
r7q36	0.784	0.023	0.23	40.84	1.14	0.98	1.02	11.7	0.49
r7q37	-0.016	0.023	0.29	57.74	1.10	0.98	1.02	8.6	0.66
r7q38	1.922	0.026	0.25	20.42	1.04	0.96	1.04	1.7	0.89
r7q39	0.083	0.023	0.41	55.67	1.00	0.98	1.02	0.4	0.99
r7q40	1.190	0.024	0.40	32.79	0.97	0.97	1.03	-2.1	1.04
r7q41	1.644	0.025	0.21	24.72	1.09	0.97	1.03	5.0	0.76
r7q42	1.012	0.024	0.39	36.26	0.99	0.98	1.02	-0.9	1.01
r7q43	0.205	0.023	0.45	53.13	0.97	0.98	1.02	-3.0	1.14
r7q44	0.929	0.024	0.35	37.94	1.02	0.98	1.02	1.9	0.89
r7q45	1.160	0.024	0.33	33.40	1.03	0.97	1.03	2.0	0.89
r7q46	1.245	0.024	0.29	31.79	1.07	0.97	1.03	5.0	0.79
r7q47	-0.113	0.024	0.50	59.82	0.92	0.98	1.02	-6.7	1.28
r7q48	1.315	0.024	0.30	30.50	1.04	0.97	1.03	2.9	0.85
r7q49	0.201	0.023	0.40	53.28	1.01	0.98	1.02	1.3	0.96
r7q50	1.451	0.173	0.13	28.16	1.18	0.97	1.03	10.7	0.55

TABLE C.12 Year 7 Spelling Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
lc7q01	-2.578	0.035	0.51	82.93	1.04	0.94	1.06	1.5	0.89
lc7q02	-2.549	0.035	0.57	82.66	0.86	0.94	1.06	-5.0	1.10
lc7q03	-2.172	0.034	0.59	78.92	0.91	0.95	1.05	-3.7	1.07
lc7q04	-2.227	0.034	0.60	79.53	0.86	0.95	1.05	-5.6	1.12
lc7q05	-2.106	0.034	0.56	78.31	0.99	0.95	1.05	-0.5	0.98
lc7q06	-0.947	0.031	0.57	63.31	1.08	0.96	1.04	4.1	0.88
lc7q07	-1.249	0.031	0.50	67.71	1.18	0.96	1.04	8.4	0.68
lc7q08	-0.175	0.030	0.53	51.35	1.17	0.97	1.03	9.6	0.67
lc7q09	-0.195	0.030	0.55	51.67	1.13	0.97	1.03	7.3	0.76
lc7q10	-0.015	0.030	0.66	48.81	0.90	0.97	1.03	-6.1	1.23
lc7q11	0.758	0.030	0.55	36.50	1.07	0.97	1.03	4.2	0.90
lc7q12	0.461	0.030	0.55	41.18	1.09	0.97	1.03	5.2	0.82
lc7q13	0.910	0.030	0.57	34.21	1.01	0.97	1.03	0.8	1.00
lc7q14	1.580	0.032	0.52	24.80	1.03	0.96	1.04	1.4	0.97
lc7q15	2.103	0.034	0.53	18.59	0.91	0.95	1.05	-3.9	1.11
lc7q16	2.391	0.035	0.46	15.66	0.99	0.95	1.05	-0.5	1.00
lc7q17	-1.832	0.033	0.62	75.53	0.88	0.95	1.05	-5.2	1.14
lc7q18	-0.200	0.030	0.64	52.19	0.95	0.97	1.03	-3.0	1.14
lc7q19	-1.464	0.032	0.64	71.28	0.88	0.96	1.04	-5.9	1.17
lc7q20	-0.607	0.030	0.66	58.94	0.91	0.97	1.03	-5.5	1.20
lc7q21	-0.083	0.030	0.60	50.65	1.01	0.97	1.03	0.8	1.02
lc7q22	0.246	0.030	0.63	45.35	0.95	0.97	1.03	-3.3	1.15
lc7q23	-0.089	0.030	0.67	50.91	0.89	0.97	1.03	-7.2	1.26
lc7q24	0.841	0.030	0.62	35.96	0.93	0.97	1.03	-4.3	1.18
lc7q25	0.568	0.030	0.65	40.40	0.90	0.97	1.03	-6.3	1.24
lc7q26	0.985	0.031	0.51	33.99	1.12	0.97	1.03	6.3	0.80
lc7q27	1.322	0.031	0.50	29.26	1.07	0.96	1.04	3.5	0.87
lc7q28	1.415	0.032	0.43	28.12	1.18	0.96	1.04	8.7	0.68
lc7q29	2.022	0.034	0.47	20.47	1.04	0.95	1.05	1.8	0.94
lc7q30	2.882	0.170	0.44	12.27	0.94	0.94	1.06	-1.9	1.05

TABLE C.13 Year 9 G&P Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
lc9q31	-2.646	0.038	0.31	95.85	0.94	0.86	1.14	-0.8	1.06
lc9q32	-2.273	0.037	0.27	94.18	0.97	0.89	1.11	-0.4	1.01
lc9q33	-1.718	0.035	0.39	90.63	0.93	0.92	1.08	-1.7	1.08
lc9q34	-1.402	0.033	0.43	87.87	0.92	0.93	1.07	-2.5	1.10
lc9q35	-1.532	0.034	0.4	89.09	0.93	0.93	1.07	-2.0	1.08
lc9q36	-1.335	0.033	0.39	87.22	0.96	0.93	1.07	-1.3	1.06
lc9q37	-1.283	0.033	0.4	86.69	0.94	0.94	1.06	-1.8	1.07
lc9q38	-1.227	0.032	0.39	86.10	0.96	0.94	1.06	-1.1	1.06
lc9q39	-0.265	0.029	0.4	72.70	1.02	0.96	1.04	0.8	0.98
lc9q40	-0.175	0.029	0.47	71.14	0.96	0.97	1.03	-2.5	1.13
lc9q41	-0.862	0.031	0.4	81.75	0.98	0.95	1.05	-0.8	1.05
lc9q42	-0.150	0.029	0.51	70.73	0.93	0.97	1.03	-4.2	1.19
lc9q43	0.710	0.027	0.3	53.85	1.13	0.97	1.03	9.9	0.54
lc9q44	0.469	0.028	0.38	58.84	1.05	0.97	1.03	3.9	0.83
lc9q45	-0.013	0.028	0.44	68.26	1.00	0.97	1.03	-0.2	1.06
lc9q46	0.353	0.028	0.44	61.20	1.00	0.97	1.03	0.3	1.01
lc9q47	-0.086	0.028	0.52	69.61	0.92	0.97	1.03	-4.9	1.23
lc9q48	-0.243	0.029	0.49	72.42	0.94	0.96	1.04	-3.4	1.17
lc9q49	0.406	0.028	0.52	60.20	0.93	0.97	1.03	-4.9	1.25
lc9q50	1.661	0.028	0.28	34.45	1.12	0.97	1.03	7.3	0.64
lc9q51	0.846	0.027	0.33	51.08	1.10	0.98	1.02	8.0	0.58
lc9q52	0.286	0.028	0.52	62.67	0.92	0.97	1.03	-5.5	1.25
lc9q53	1.002	0.027	0.4	47.87	1.03	0.98	1.02	2.4	0.89
lc9q54	1.352	0.028	0.37	40.63	1.04	0.97	1.03	3.2	0.83
lc9q55	2.069	0.029	0.24	27.14	1.12	0.96	1.04	6.0	0.67
lc9q56	1.413	0.028	0.46	39.43	0.97	0.97	1.03	-2.5	1.09
lc9q57	2.134	0.029	0.28	26.08	1.06	0.96	1.04	3.2	0.81
lc9q58	2.511	0.157	0.29	20.30	1.03	0.95	1.05	1.4	0.89

TABLE C.14 Year 9 Numeracy Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
n9CAq01	-3.253	0.046	0.31	91.96	0.92	0.91	1.09	-1.7	1.08
n9CAq02	-2.700	0.041	0.41	87.41	0.88	0.93	1.07	-3.7	1.15
n9CAq03	-2.316	0.038	0.32	83.20	1.02	0.95	1.05	0.8	0.98
n9CAq04	-1.874	0.036	0.38	77.26	0.99	0.96	1.04	-0.7	1.03
n9CAq05	-1.938	0.036	0.32	78.20	1.04	0.96	1.04	1.8	0.92
n9CAq06	-1.135	0.033	0.53	64.90	0.90	0.97	1.03	-6.8	1.29
n9CAq07	-1.807	0.035	0.46	76.26	0.92	0.96	1.04	-4.2	1.17
n9CAq08	-0.902	0.033	0.51	60.53	0.94	0.97	1.03	-4.0	1.18
n9CAq09	-0.756	0.032	0.42	57.73	1.05	0.97	1.03	3.4	0.87
n9CAq10	-1.244	0.033	0.52	66.91	0.91	0.97	1.03	-5.9	1.26
n9CAq11	-0.738	0.032	0.52	57.42	0.94	0.97	1.03	-4.3	1.18
n9CAq12	-0.542	0.032	0.51	53.61	0.95	0.97	1.03	-3.4	1.14
n9CAq13	-0.625	0.032	0.53	55.25	0.93	0.97	1.03	-4.8	1.21
n9CAq14	-0.551	0.032	0.31	53.85	1.21	0.97	1.03	13.4	0.42
n9CAq15	-0.130	0.032	0.44	45.65	1.05	0.97	1.03	3.4	0.85
n9CAq16	0.038	0.033	0.24	42.44	1.29	0.97	1.03	17.0	0.24
n9CAq17	-0.369	0.032	0.51	50.34	0.96	0.97	1.03	-2.5	1.09
n9CAq18	-0.134	0.032	0.34	45.76	1.18	0.97	1.03	11.0	0.52
n9CAq19	0.518	0.034	0.56	33.73	0.90	0.96	1.04	-5.8	1.17
n9CAq20	0.569	0.034	0.37	32.88	1.12	0.96	1.04	6.2	0.71
n9CAq21	0.049	0.033	0.28	42.28	1.24	0.97	1.03	14.4	0.38
n9CAq22	0.721	0.035	0.57	30.37	0.89	0.96	1.04	-5.8	1.18
n9CAq23	0.535	0.034	0.44	33.52	1.05	0.96	1.04	2.7	0.88
n9CAq24	1.658	0.039	0.42	17.32	1.00	0.94	1.06	-0.1	0.97
n9CAq25	0.253	0.033	0.60	38.59	0.86	0.97	1.03	-8.9	1.31
n9CAq26	1.214	0.037	0.36	22.99	1.08	0.95	1.05	3.4	0.82
n9CAq27	2.321	0.044	0.55	10.96	0.82	0.92	1.08	-5.0	1.18
n9CAq28	1.273	0.037	0.30	22.19	1.15	0.95	1.05	5.8	0.72
n9CAq29	1.617	0.039	0.54	17.86	0.88	0.94	1.06	-4.5	1.13
n9CAq30	1.982	0.042	0.44	14.42	0.97	0.93	1.07	-0.9	1.02
n9CAq31	2.386	0.045	0.54	10.90	0.81	0.92	1.08	-5.0	1.18
n9CAq32	2.846	0.049	0.41	7.86	0.96	0.90	1.10	-0.8	1.05

(table continues)

TABLE C.14 (continued)

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
n9NCq01	-0.969	0.033	0.51	61.85	0.93	0.97	1.03	-4.9	1.21
n9NCq02	-2.694	0.041	0.33	87.39	0.94	0.93	1.07	-1.7	1.06
n9NCq03	-2.272	0.038	0.48	82.72	0.84	0.95	1.05	-6.5	1.23
n9NCq04	-2.093	0.037	0.46	80.41	0.87	0.95	1.05	-5.5	1.20
n9NCq05	-1.355	0.034	0.42	68.90	1.00	0.97	1.03	0.2	1.00
n9NCq06	-1.840	0.036	0.40	76.82	0.98	0.96	1.04	-0.7	1.05
n9NCq07	-1.031	0.033	0.43	63.06	1.03	0.97	1.03	2.1	0.95
n9NCq08	-1.005	0.033	0.34	62.56	1.13	0.97	1.03	8.3	0.65
n9NCq09	-1.269	0.033	0.42	67.40	1.01	0.97	1.03	0.4	0.99
n9NCq10	-0.577	0.032	0.55	54.33	0.91	0.97	1.03	-6.7	1.27
n9NCq11	-0.410	0.032	0.48	51.07	1.00	0.97	1.03	-0.1	1.00
n9NCq12	-1.134	0.033	0.41	64.95	1.04	0.97	1.03	2.4	0.92
n9NCq13	-0.189	0.032	0.37	46.75	1.13	0.97	1.03	8.2	0.63
n9NCq14	-0.006	0.033	0.47	43.24	1.02	0.97	1.03	1.3	0.94
n9NCq15	-0.439	0.032	0.39	51.62	1.11	0.97	1.03	7.2	0.70
n9NCq16	-0.216	0.032	0.42	47.29	1.07	0.97	1.03	4.7	0.81
n9NCq17	-0.129	0.032	0.30	45.60	1.22	0.97	1.03	13.5	0.41
n9NCq18	0.392	0.033	0.50	35.87	0.97	0.97	1.03	-1.5	1.03
n9NCq19	1.064	0.036	0.58	24.93	0.85	0.96	1.04	-6.9	1.19
n9NCq20	0.600	0.034	0.59	32.30	0.87	0.96	1.04	-7.3	1.24
n9NCq21	0.160	0.033	0.62	40.14	0.83	0.97	1.03	10.8	1.38
n9NCq22	1.152	0.036	0.49	23.70	0.96	0.95	1.05	-1.7	1.03
n9NCq23	0.352	0.033	0.55	36.64	0.92	0.97	1.03	-5.0	1.16
n9NCq24	1.197	0.037	0.56	23.07	0.86	0.95	1.05	-6.0	1.16
n9NCq25	1.610	0.039	0.40	17.81	1.02	0.95	1.05	0.9	0.94
n9NCq26	0.868	0.035	0.34	27.94	1.15	0.96	1.04	7.0	0.70
n9NCq27	1.503	0.038	0.48	19.09	0.93	0.95	1.05	-2.7	1.04
n9NCq28	2.697	0.047	0.49	8.22	0.85	0.91	1.09	-3.5	1.15
n9NCq29	1.712	0.040	0.34	16.74	1.05	0.94	1.06	1.7	0.87
n9NCq30	2.020	0.042	0.44	13.57	0.95	0.93	1.07	-1.6	1.03
n9NCq31	2.543	0.046	0.43	9.48	0.95	0.92	1.08	-1.2	1.05
n9NCq32	2.793	0.287	0.36	7.91	0.99	0.90	1.10	-0.2	1.01

TABLE C.15 Year 9 Reading Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
r9q01	-3.229	0.034	0.33	96.26	0.91	0.85	1.15	-1.3	1.09
r9q02	1.002	0.026	0.15	38.55	1.25	0.97	1.03	16.1	0.24
r9q03	-1.103	0.028	0.41	78.59	0.96	0.96	1.04	-1.8	1.06
r9q04	-1.182	0.028	0.45	79.72	0.93	0.95	1.05	-3.1	1.11
r9q05	-0.904	0.027	0.35	75.56	1.03	0.96	1.04	1.5	0.94
r9q06	-1.823	0.030	0.39	87.40	0.93	0.93	1.07	-2.0	1.08
r9q07	-1.141	0.028	0.38	79.14	0.99	0.95	1.05	-0.5	1.01
r9q08	0.473	0.026	0.45	49.33	0.99	0.97	1.03	-1.0	1.05
r9q09	-0.133	0.026	0.38	61.70	1.05	0.97	1.03	3.6	0.85
r9q10	-2.010	0.030	0.41	89.15	0.91	0.93	1.07	-2.4	1.10
r9q11	0.396	0.026	0.39	50.94	1.04	0.97	1.03	3.2	0.85
r9q12	-0.191	0.026	0.37	62.84	1.06	0.97	1.03	3.7	0.86
r9q13	1.044	0.026	0.46	37.74	0.96	0.97	1.03	-3.0	1.11
r9q14	-0.583	0.027	0.56	70.16	0.86	0.97	1.03	-8.6	1.32
r9q15	-0.695	0.027	0.59	72.12	0.83	0.96	1.04	-9.6	1.36
r9q16	-1.760	0.030	0.51	86.79	0.84	0.94	1.06	-5.3	1.20
r9q17	0.060	0.026	0.42	57.86	1.01	0.97	1.03	1.1	0.96
r9q18	0.357	0.026	0.47	51.77	0.97	0.97	1.03	-2.3	1.10
r9q19	1.375	0.026	0.37	31.48	1.02	0.97	1.03	1.1	0.93
r9q20	-0.480	0.026	0.37	68.35	1.03	0.97	1.03	2.1	0.92
r9q21	0.532	0.026	0.54	48.18	0.89	0.97	1.03	-8.4	1.35
r9q22	1.193	0.026	0.32	34.91	1.08	0.97	1.03	5.0	0.77
r9q23	0.666	0.026	0.41	45.44	1.02	0.97	1.03	1.6	0.92
r9q24	-0.600	0.027	0.49	70.55	0.92	0.97	1.03	-4.5	1.18
r9q25	0.685	0.026	0.45	45.05	0.98	0.97	1.03	-1.4	1.06
r9q26	-1.435	0.029	0.43	83.18	0.92	0.95	1.05	-2.9	1.11
r9q27	0.029	0.026	0.41	58.58	1.02	0.97	1.03	1.7	0.93
r9q28	-1.197	0.028	0.49	80.05	0.89	0.95	1.05	-4.6	1.17
r9q29	1.342	0.026	0.34	32.16	1.04	0.97	1.03	2.6	0.87
r9q30	1.928	0.028	0.16	22.34	1.15	0.96	1.04	6.5	0.69
r9q31	-0.788	0.027	0.26	73.80	1.10	0.96	1.04	4.8	0.74
r9q32	1.391	0.026	0.24	31.27	1.14	0.97	1.03	7.9	0.64
r9q33	0.194	0.026	0.55	55.30	0.89	0.97	1.03	-8.7	1.36
r9q34	0.801	0.026	0.30	42.75	1.13	0.97	1.03	9.0	0.58
r9q35	0.265	0.026	0.37	53.83	1.06	0.97	1.03	4.7	0.81
r9q36	-0.678	0.027	0.50	72.05	0.92	0.96	1.04	-4.8	1.20
r9q37	-0.078	0.026	0.47	60.84	0.96	0.97	1.03	-2.5	1.11
r9q38	0.910	0.026	0.35	40.61	1.07	0.97	1.03	4.8	0.78
r9q39	-0.917	0.027	0.43	76.00	0.95	0.96	1.04	-2.3	1.08
r9q40	0.145	0.026	0.43	56.36	1.01	0.97	1.03	0.6	0.99
r9q41	-0.845	0.027	0.43	74.89	0.96	0.96	1.04	-2.0	1.08
r9q42	0.822	0.026	0.38	42.42	1.04	0.97	1.03	3.2	0.85
r9q43	0.072	0.026	0.44	57.89	0.99	0.97	1.03	-0.6	1.04
r9q44	0.498	0.026	0.51	49.10	0.92	0.97	1.03	-6.0	1.27
r9q45	0.982	0.026	0.30	39.24	1.11	0.97	1.03	7.2	0.65
r9q46	3.330	0.032	0.28	7.61	0.99	0.90	1.10	-0.2	1.02
r9q47	1.211	0.026	0.33	34.81	1.06	0.97	1.03	4.0	0.80
r9q48	0.039	0.026	0.45	58.64	0.98	0.97	1.03	-1.3	1.06
r9q49	0.029	0.186	0.52	58.99	0.92	0.97	1.03	-6.1	1.26

TABLE C.16 Year 9 Spelling Item Calibration Results

Item_Label	Delta_Centered	Error	Discrimination	Facility	MnSQ	CI_L	CI_H	T	Slope
lc9q01	-2.738	0.041	0.53	86.23	0.88	0.93	1.07	-3.6	1.07
lc9q02	-2.254	0.039	0.57	81.74	0.88	0.94	1.06	-4.1	1.10
lc9q03	-1.783	0.037	0.56	76.55	0.99	0.95	1.05	-0.3	0.99
lc9q04	-1.624	0.036	0.40	74.64	1.24	0.95	1.05	9.2	0.55
lc9q05	-1.340	0.035	0.57	70.92	0.99	0.96	1.04	-0.5	1.00
lc9q06	-0.390	0.033	0.60	56.45	1.00	0.96	1.04	-0.1	1.04
lc9q07	-0.394	0.033	0.57	56.55	1.06	0.96	1.04	3.1	0.91
lc9q08	0.576	0.034	0.54	40.52	1.07	0.96	1.04	3.9	0.88
lc9q09	0.341	0.033	0.58	44.43	1.01	0.96	1.04	0.6	0.99
lc9q10	0.356	0.033	0.58	44.18	1.01	0.96	1.04	0.6	0.99
lc9q11	-0.041	0.033	0.60	50.82	1.00	0.96	1.04	-0.1	1.03
lc9q12	0.553	0.034	0.60	40.99	0.97	0.96	1.04	-1.4	1.08
lc9q13	0.596	0.034	0.58	40.30	1.01	0.96	1.04	0.4	1.01
lc9q14	1.421	0.035	0.56	27.75	0.97	0.96	1.04	-1.5	1.07
lc9q15	1.734	0.036	0.50	23.57	1.01	0.95	1.05	0.6	0.96
lc9q16	1.885	0.037	0.54	21.69	0.93	0.95	1.05	-2.8	1.11
lc9q17	-2.870	0.042	0.49	87.84	0.89	0.93	1.07	-3.1	1.06
lc9q18	-2.135	0.039	0.59	81.22	0.83	0.94	1.06	-6.1	1.18
lc9q19	-1.139	0.035	0.54	68.84	1.05	0.96	1.04	2.5	0.93
lc9q20	-0.741	0.034	0.60	63.07	0.96	0.96	1.04	-1.9	1.09
lc9q21	-0.428	0.034	0.45	58.14	1.23	0.96	1.04	11.7	0.52
lc9q22	-1.130	0.035	0.60	69.31	0.93	0.96	1.04	-3.5	1.15
lc9q23	0.248	0.034	0.55	47.32	1.07	0.96	1.04	3.7	0.89
lc9q24	-0.277	0.034	0.64	56.31	0.91	0.96	1.04	-4.7	1.22
lc9q25	1.404	0.035	0.59	29.01	0.91	0.96	1.04	-4.5	1.18
lc9q26	1.867	0.037	0.54	22.84	0.93	0.95	1.05	-2.7	1.11
lc9q27	1.183	0.035	0.51	32.70	1.07	0.96	1.04	3.3	0.91
lc9q28	2.164	0.038	0.49	19.55	0.98	0.95	1.05	-0.8	1.04
lc9q29	1.925	0.038	0.46	22.66	1.05	0.95	1.05	2.0	0.91
lc9q30	3.029	0.193	0.40	11.54	0.98	0.92	1.08	-0.5	1.01

TABLE C.17 Years 3, 5, 7, and 9 Writing Item Calibration Results

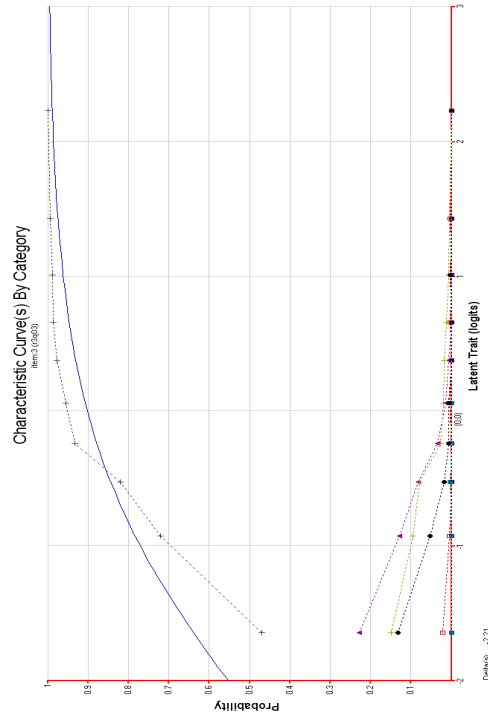
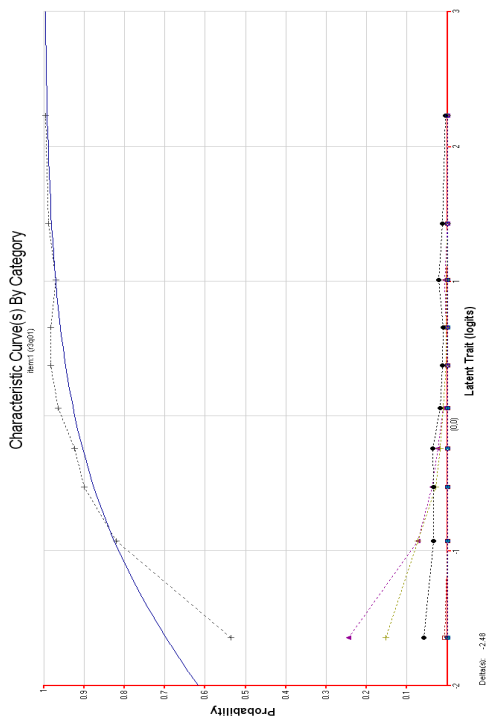
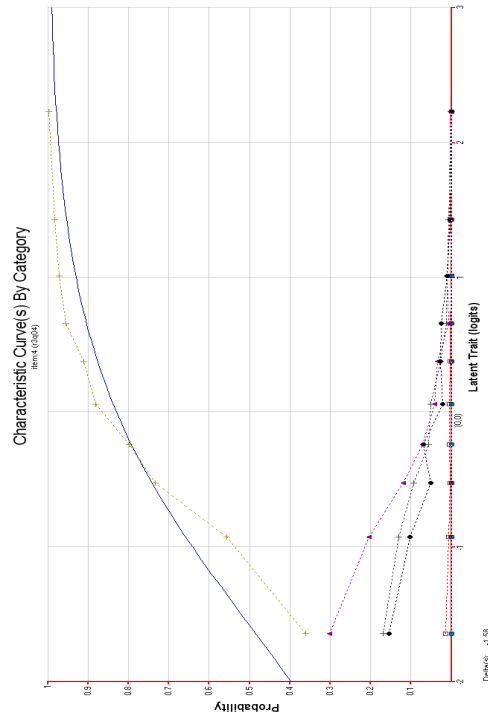
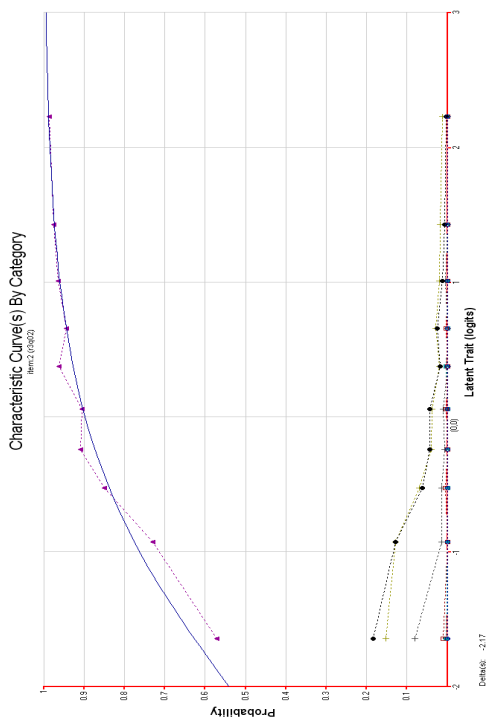
Item_Label	Delta_Centered	Error	Discrimination	MnSQ	CI_L	CI_H	T
Audience	-0.165	0.010	0.92	0.78	0.98	1.02	-21.9
Text Structure	-0.323	0.011	0.87	0.96	0.98	1.02	-3.7
Ideas	-0.392	0.011	0.88	0.92	0.98	1.02	-7.6
Persuasive Devices	0.079	0.011	0.87	0.95	0.98	1.02	-4.8
Vocabulary	-0.296	0.011	0.86	0.99	0.98	1.02	-0.8
Cohesion	-0.860	0.012	0.84	0.93	0.98	1.02	-5.6
Paragraphing	1.433	0.011	0.83	1.05	0.98	1.02	5.0
Sentence Structure	0.813	0.010	0.89	1.06	0.98	1.02	5.2
Punctuation	0.329	0.011	0.80	1.43	0.98	1.02	35.0
Spelling	-0.618	0.033	0.86	1.23	0.98	1.02	20.2

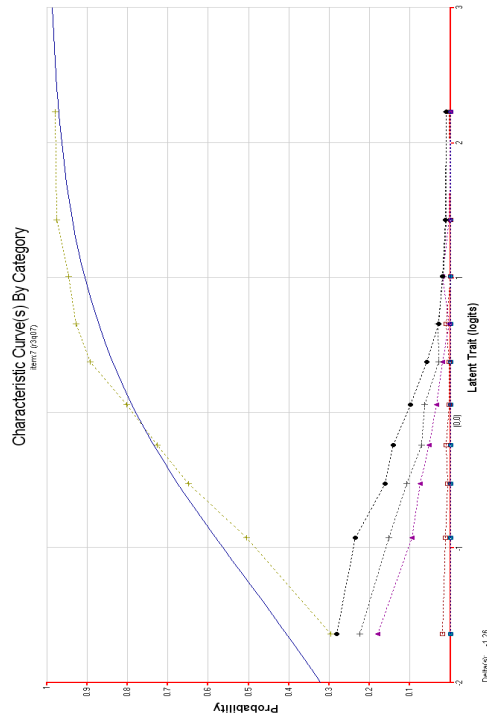
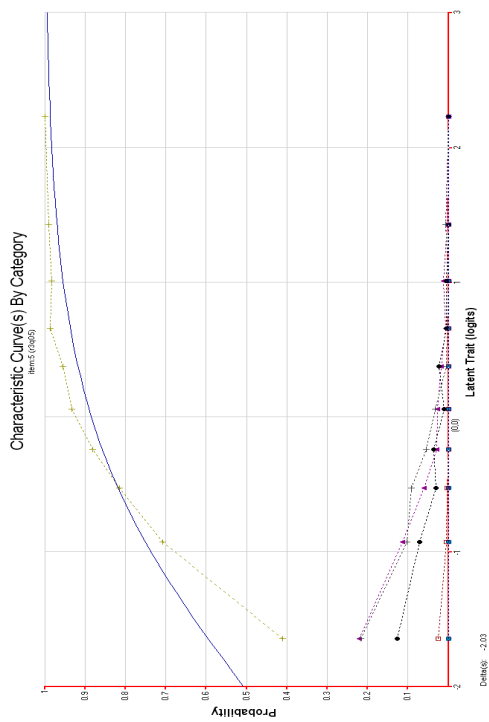
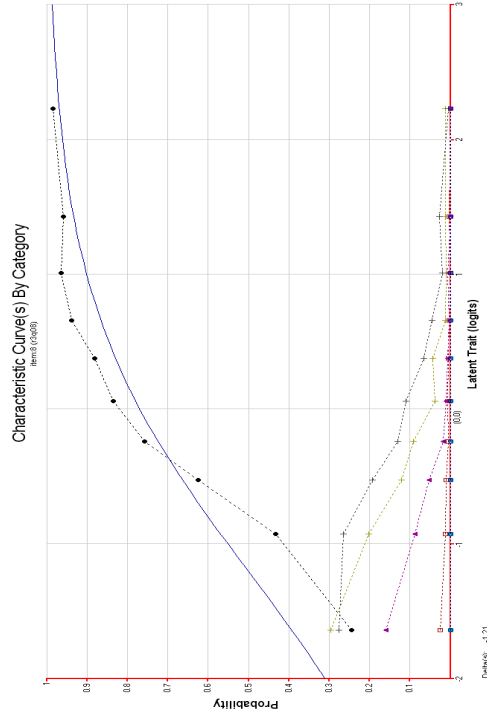
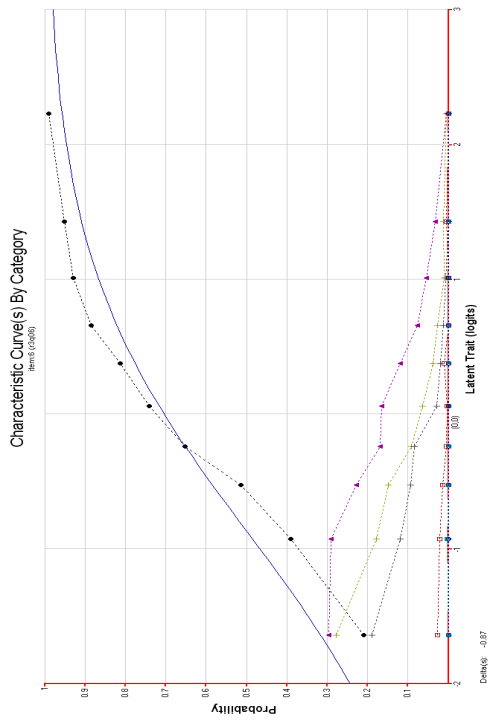
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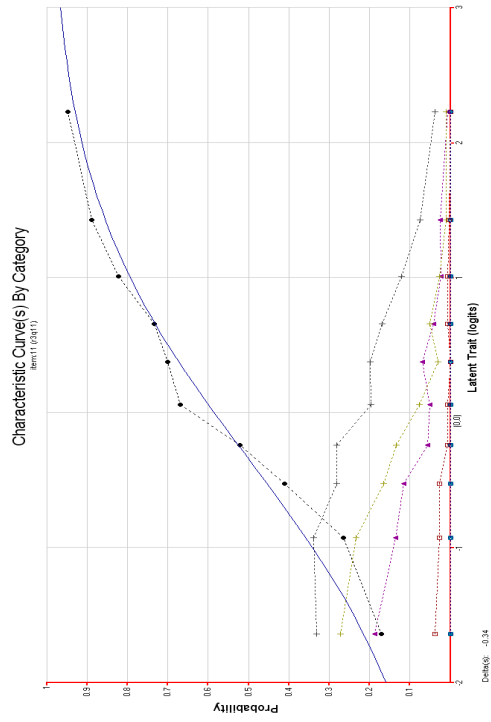
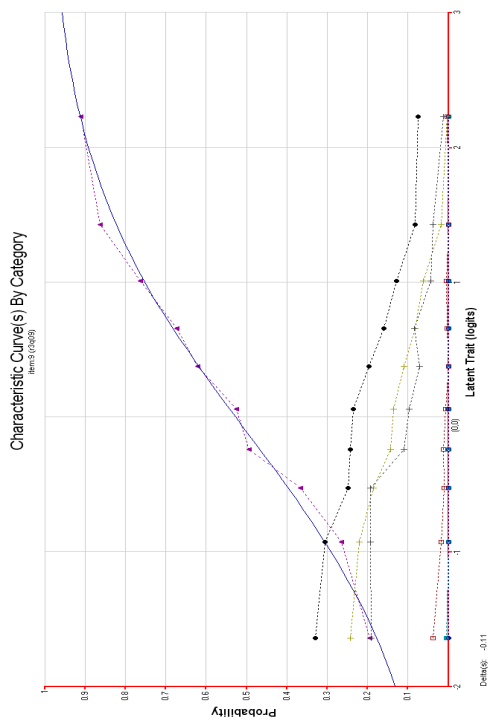
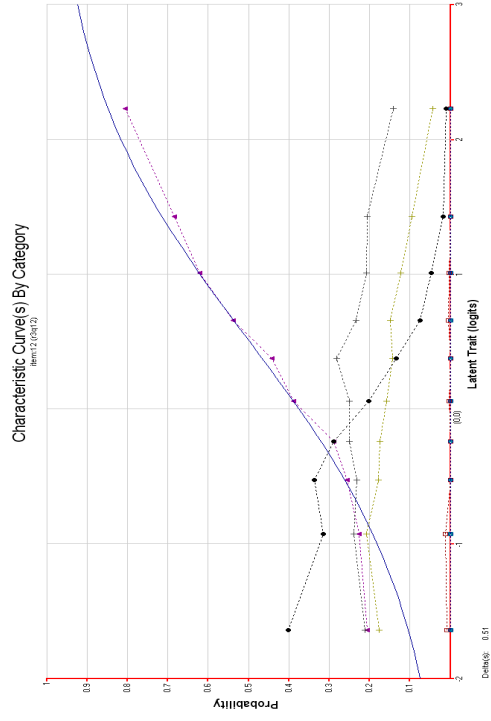
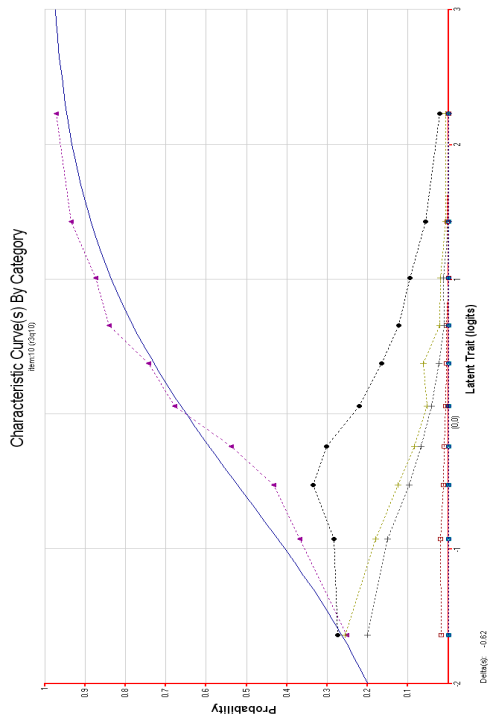
TABLE C.17 (continued)

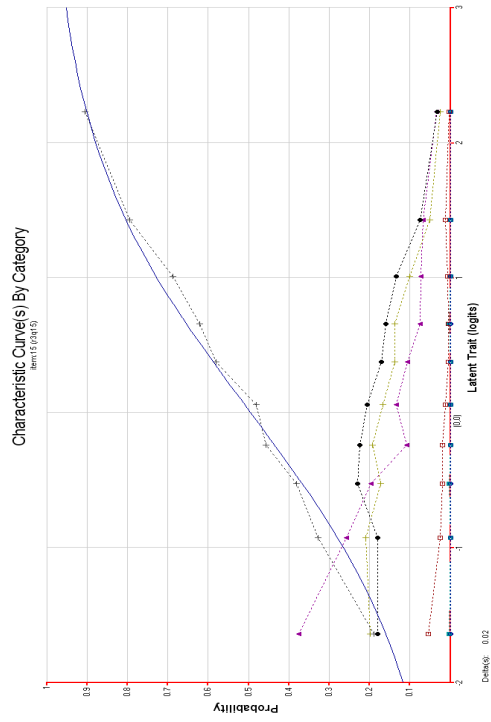
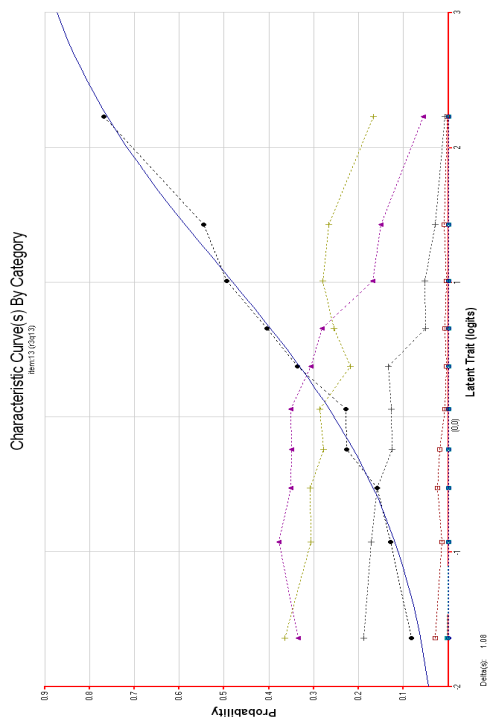
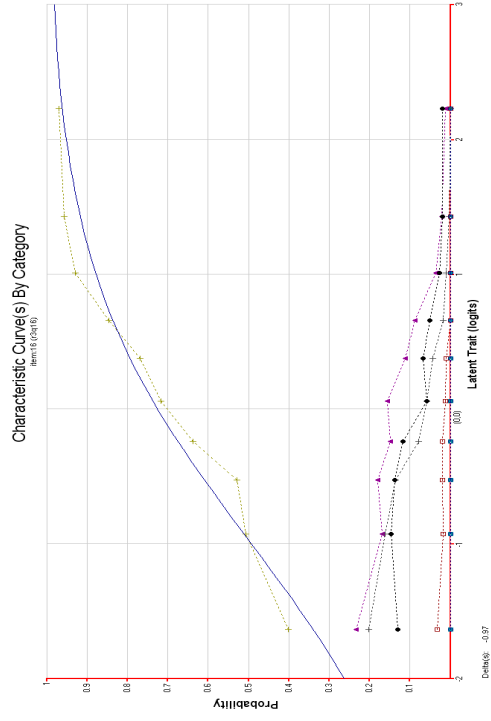
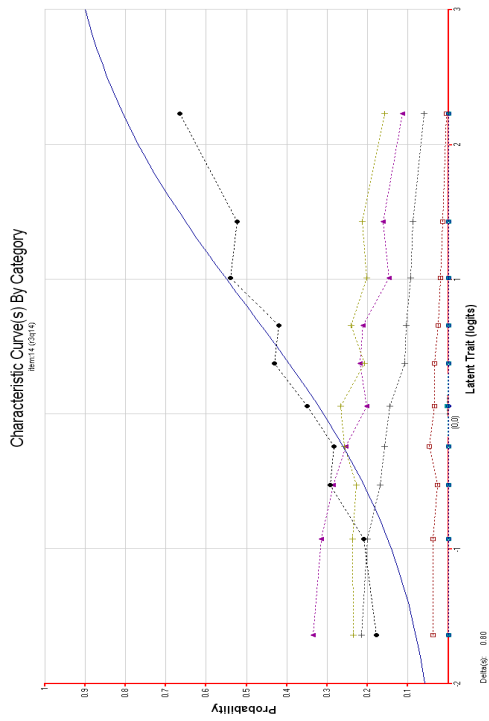
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	2	-5.582	0.045
	3	-1.300	0.025
	4	2.812	0.025
	5	6.149	0.040
	6	9.124	
Text Structure	0		
	1	-7.387	0.040
	2	-1.954	0.024
	3	2.394	0.022
	4	6.946	
Ideas	0		
	1	-8.508	0.067
	2	-5.188	0.042
	3	-0.518	0.024
	4	4.988	0.030
	5	9.225	
Persuasive Devices	0		
	1	-7.701	0.041
	2	-1.757	0.024
	3	2.627	0.023
	4	6.830	
Vocabulary	0		
	1	-8.989	0.067
	2	-6.235	0.046
	3	1.208	0.023
	4	5.118	0.032
	5	8.898	
Cohesion	0		
	1	-8.345	0.052
	2	-3.650	0.032
	3	3.442	0.023
	4	8.553	
Paragraphing	0		
	1	-4.661	0.025
	2	-0.165	0.021
	3	4.826	
Sentence Structure	0		
	1	-9.417	0.080
	2	-5.993	0.042
	3	-1.482	0.025
	4	2.101	0.026
	5	5.742	0.045
	6	9.048	
Punctuation	0		
	1	-8.777	0.065
	2	-4.583	0.034
	3	0.077	0.023
	4	4.657	0.032
	5	8.627	
Spelling	0		
	1	-8.928	0.068
	2	-5.501	0.046
	3	-1.825	0.028
	4	1.578	0.023
	5	5.363	0.032
	6	9.313	

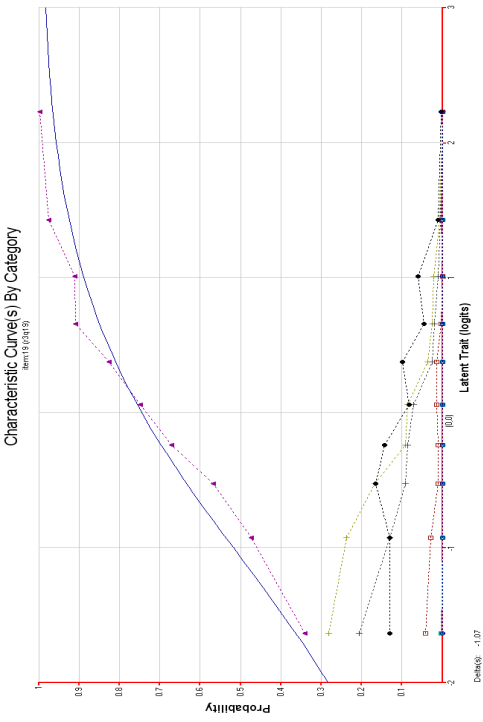
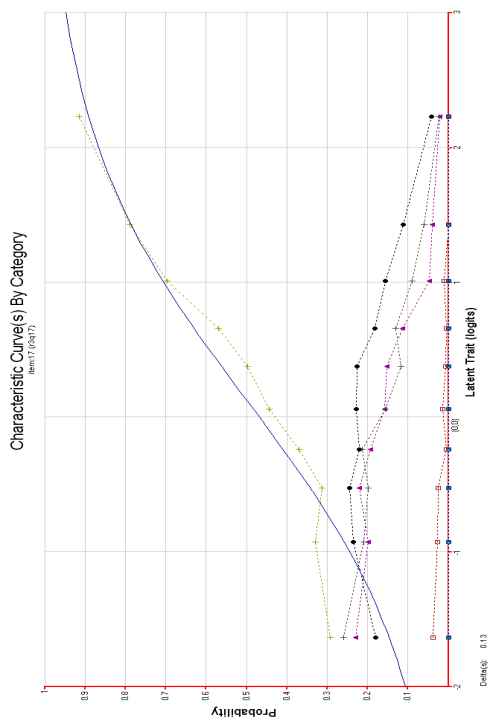
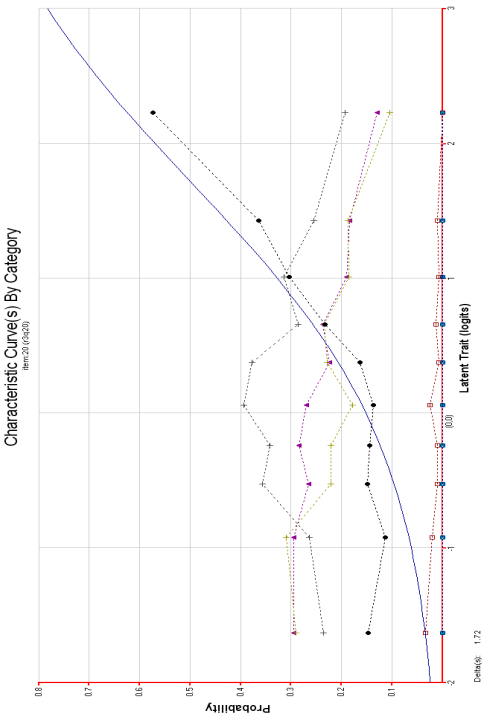
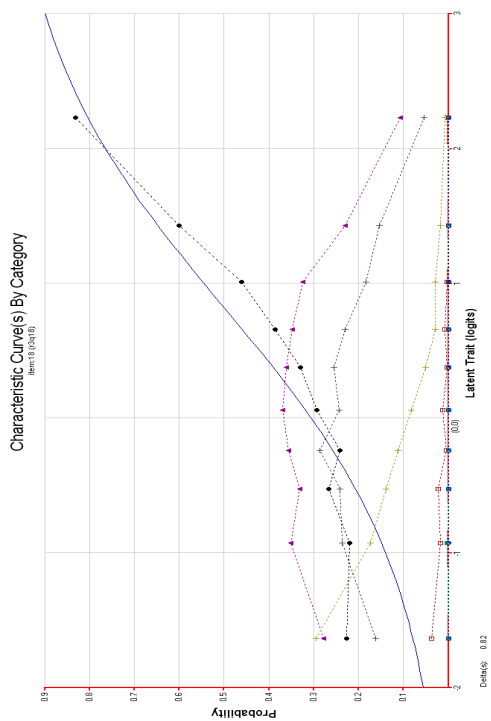
APPENDIX D. ICC PLOTS
Year 3 Reading

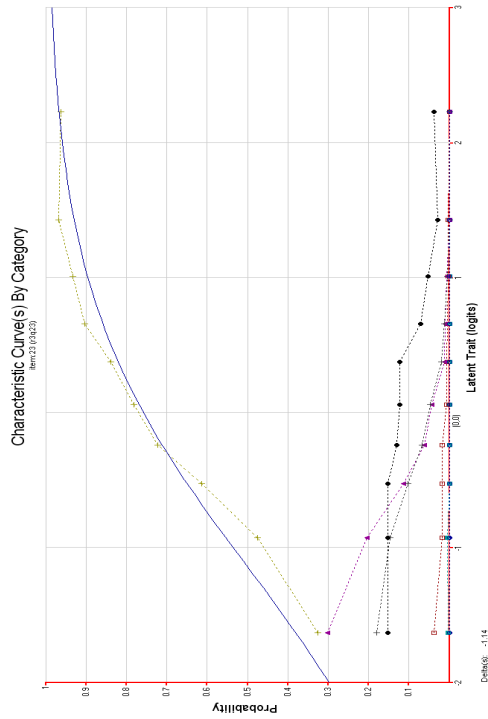
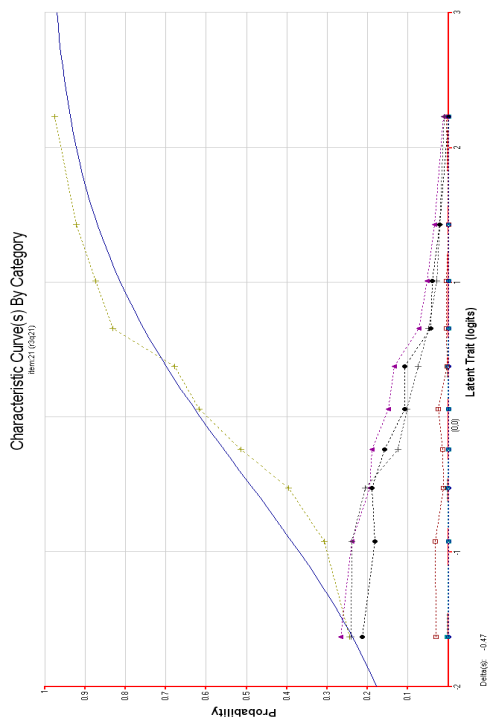
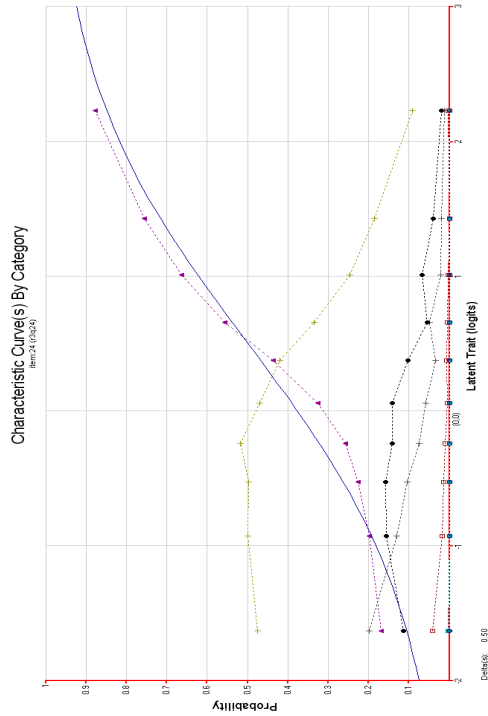
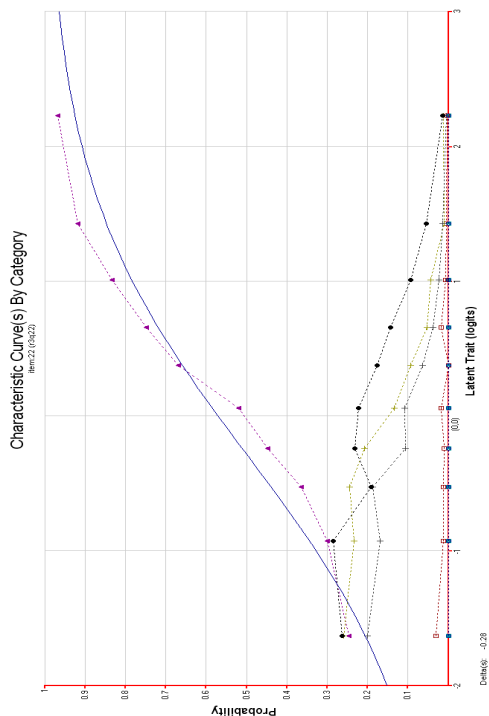


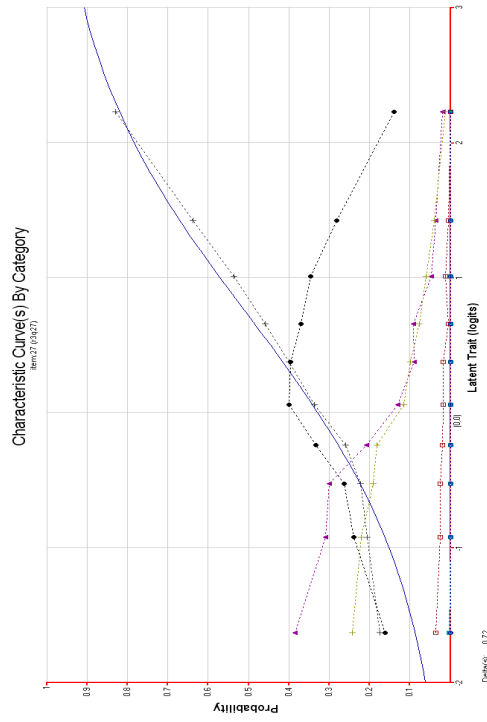
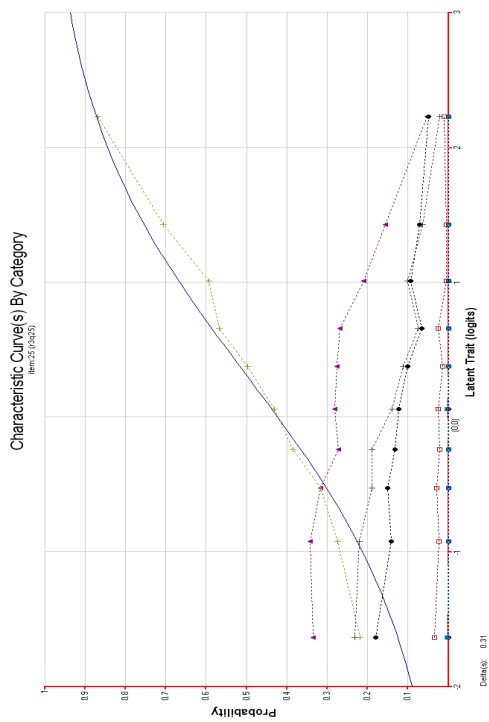
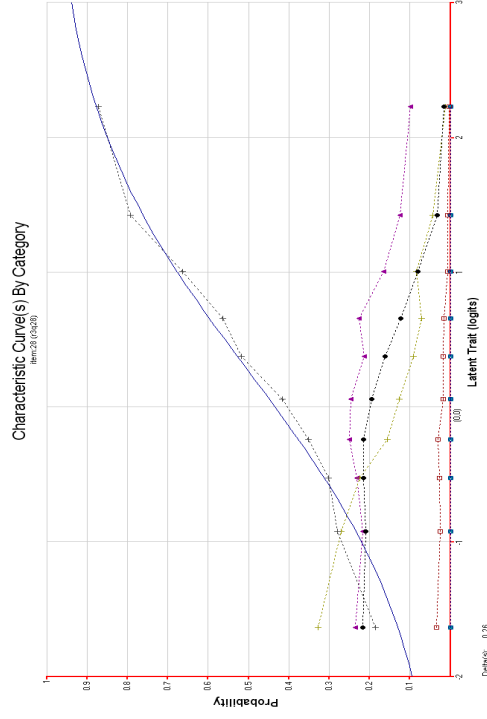
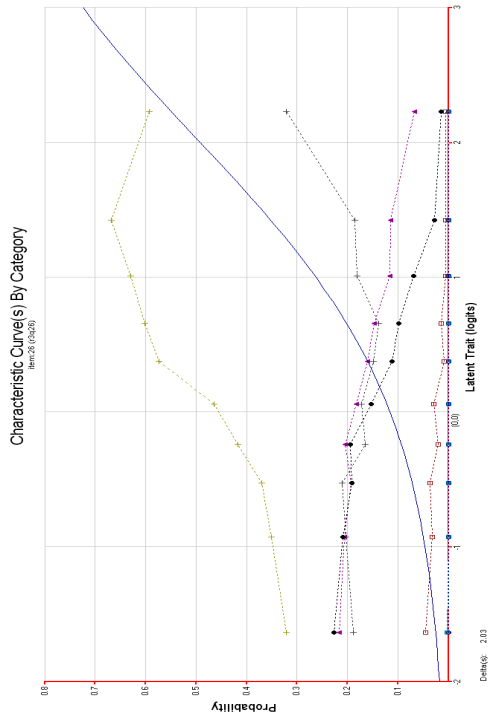


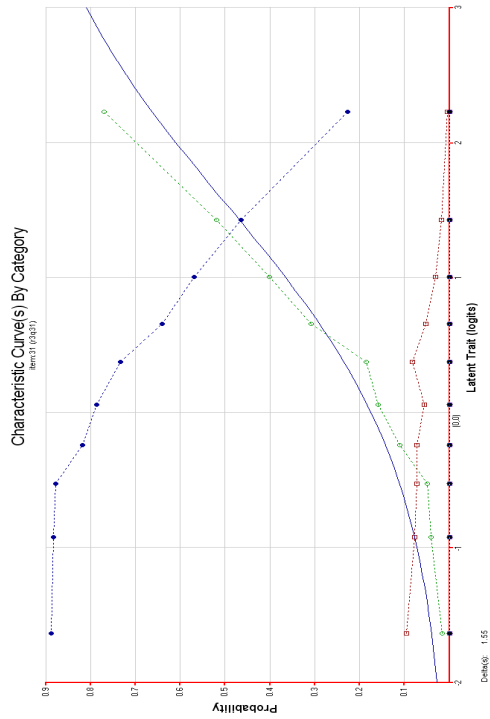
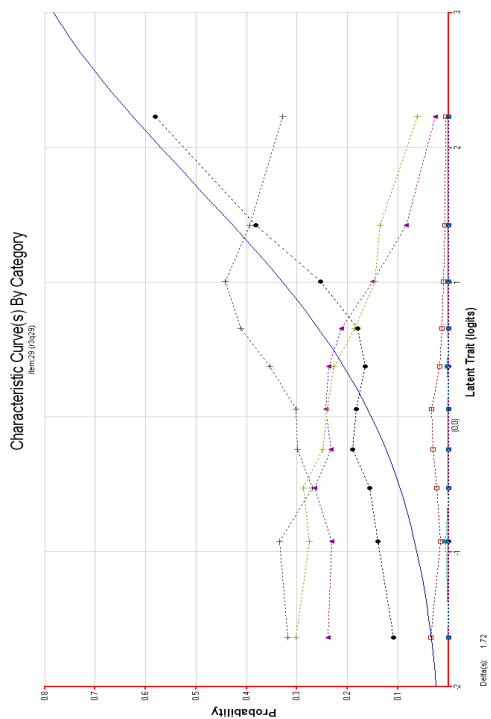
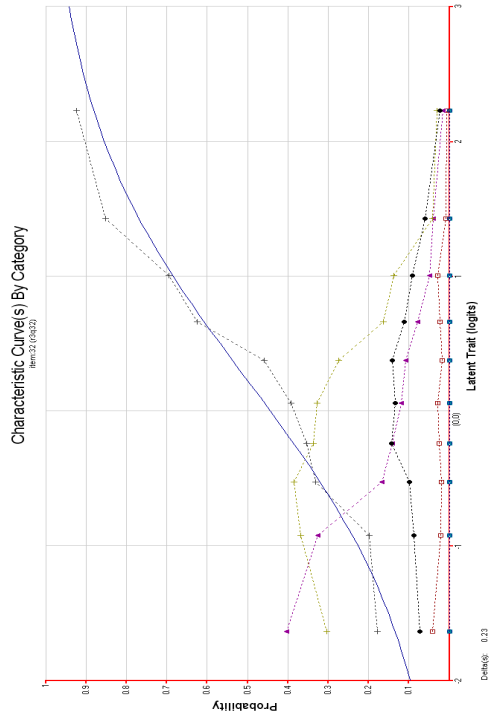
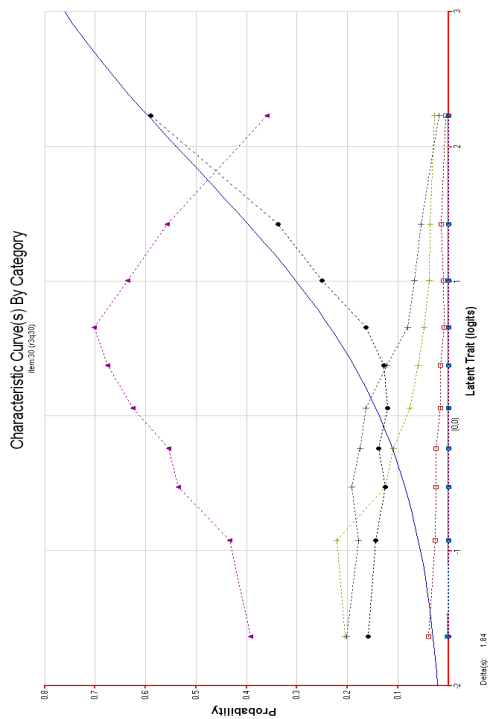


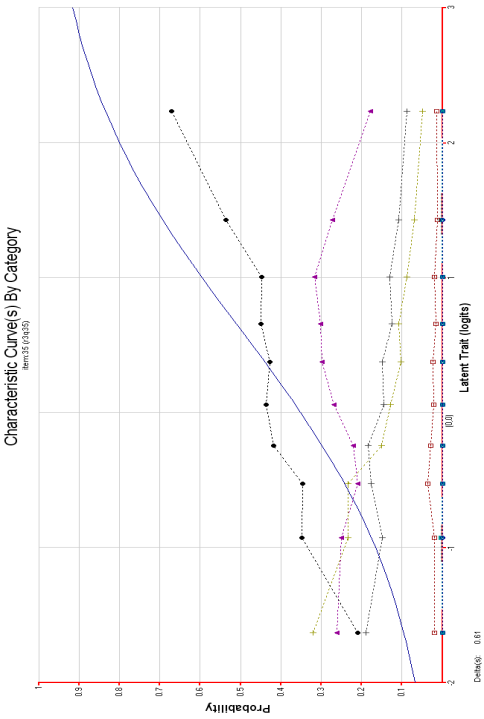
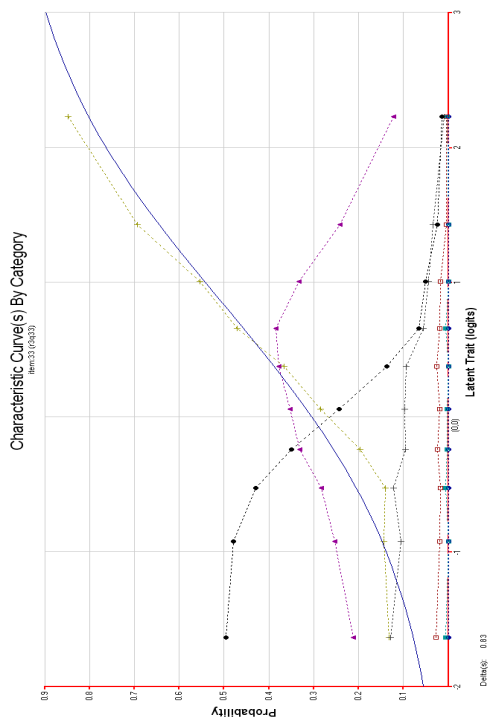
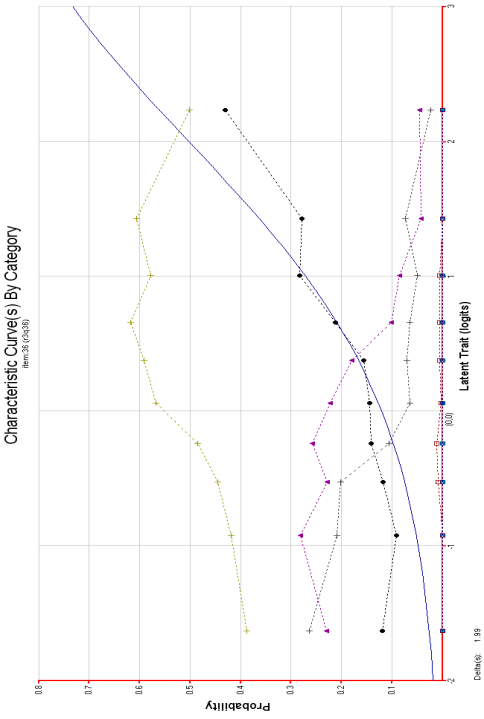
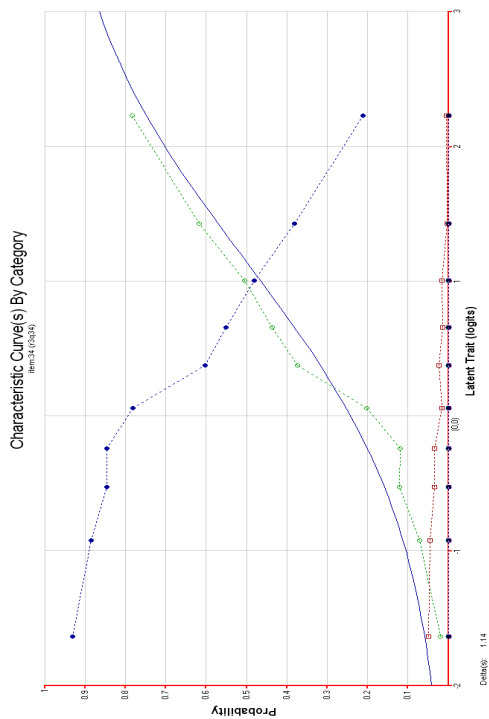




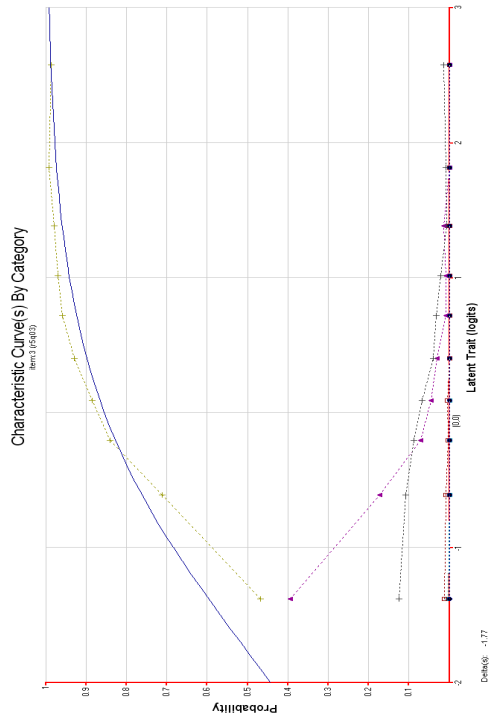
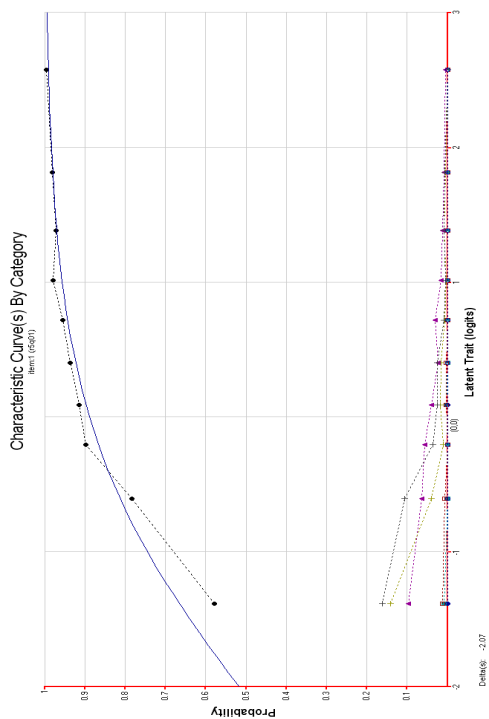
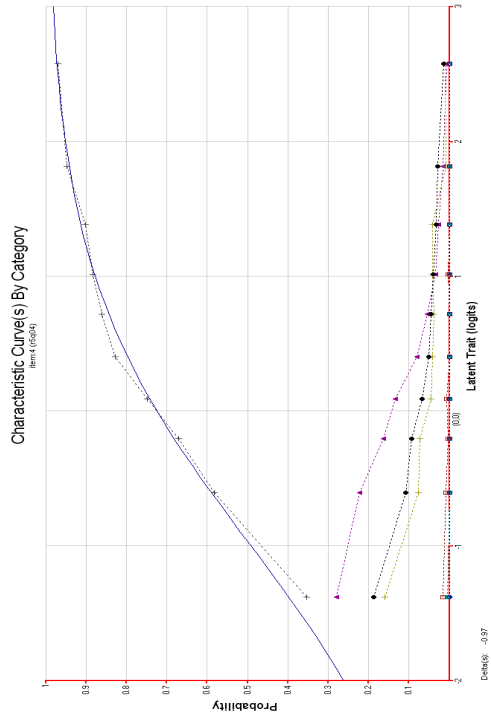
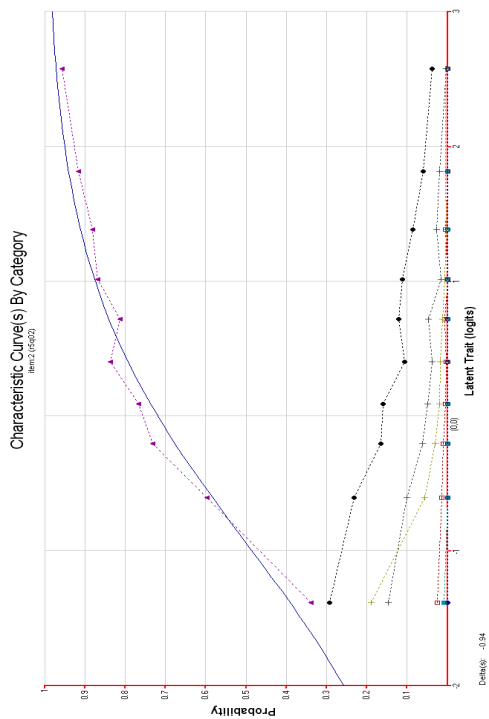


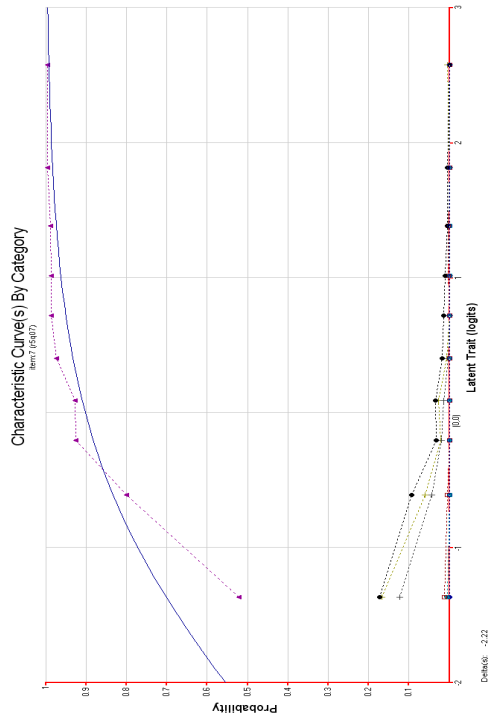
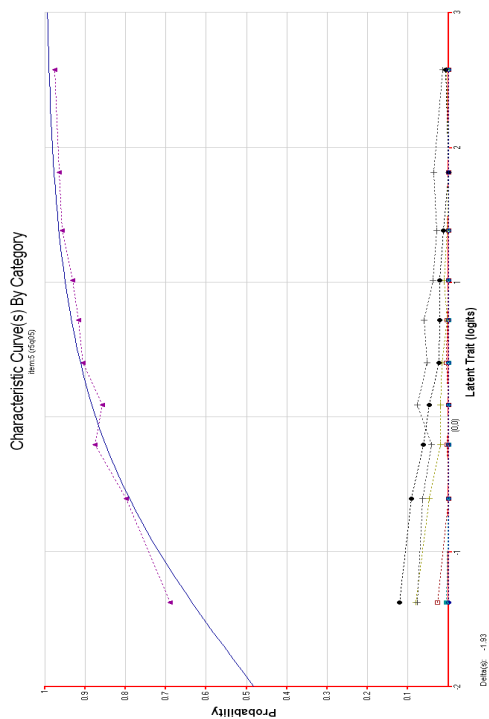
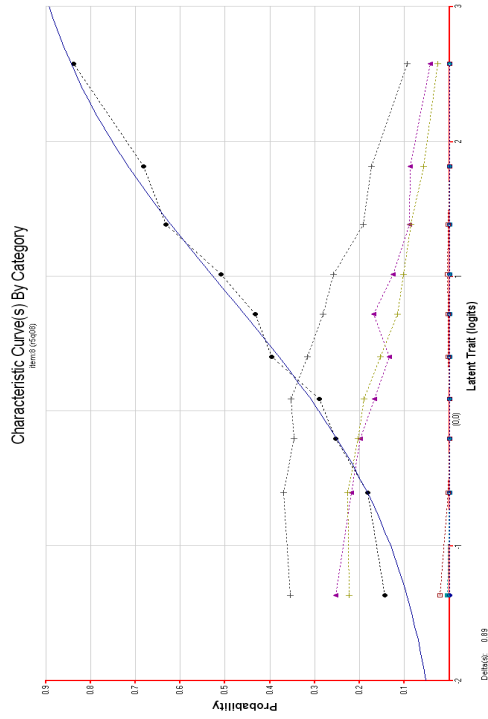
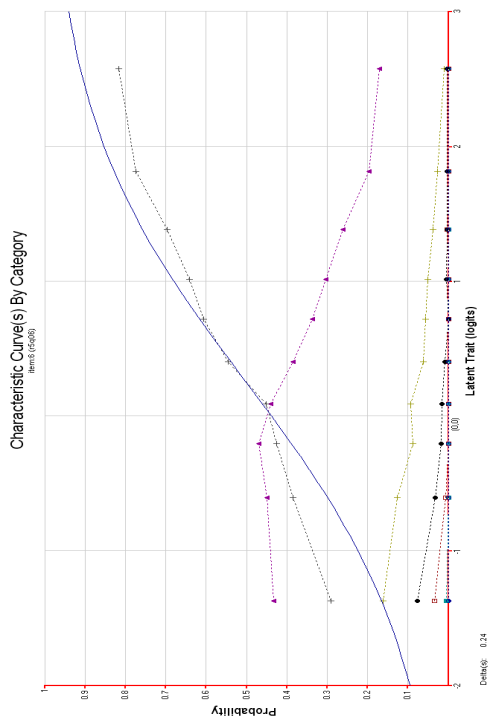


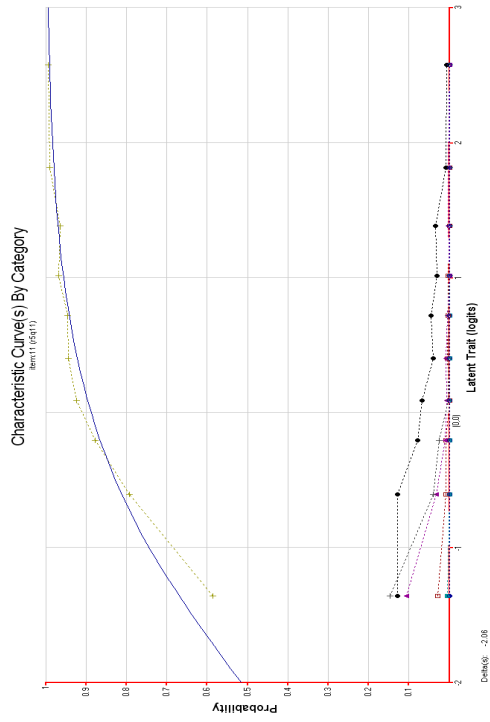
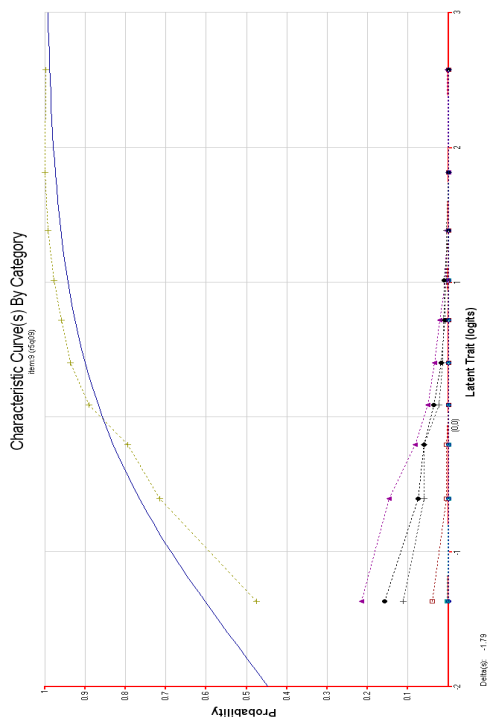
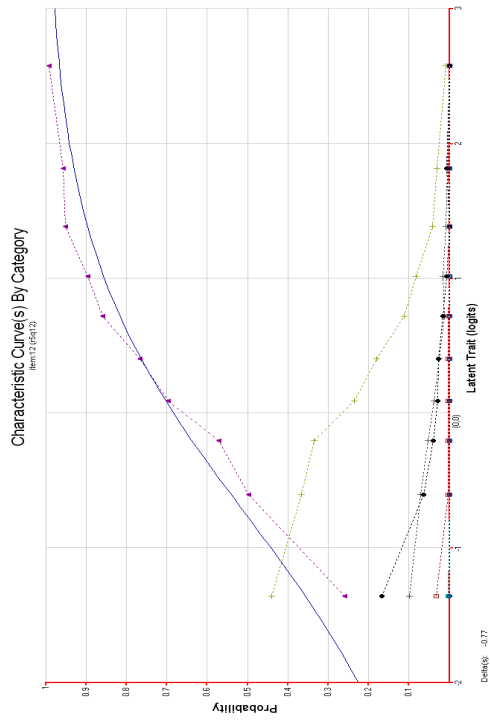
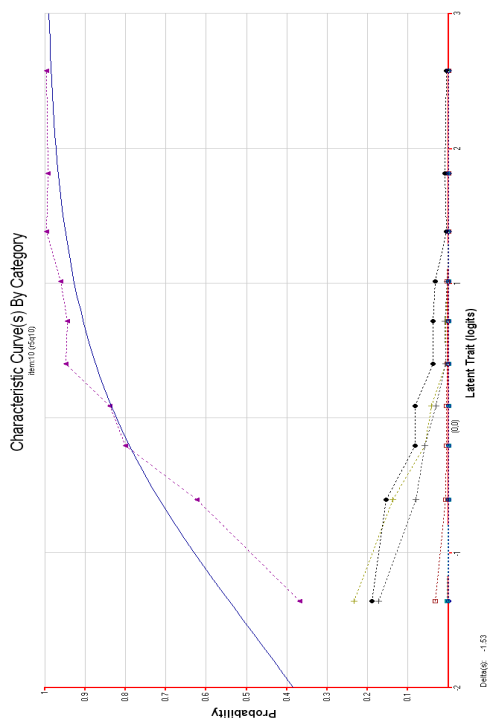


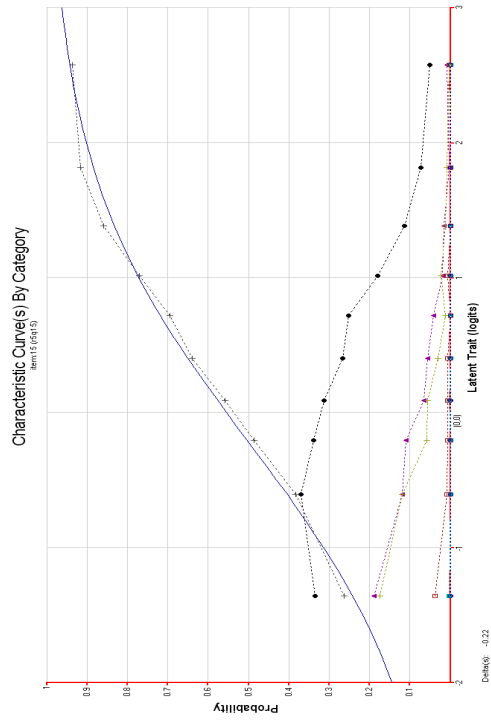
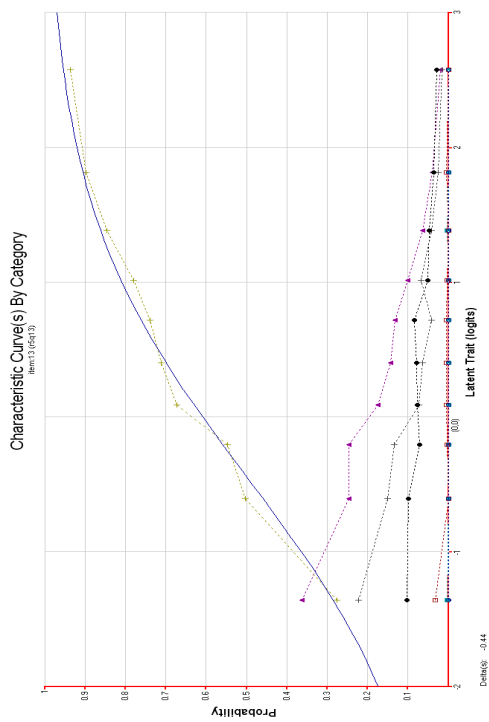
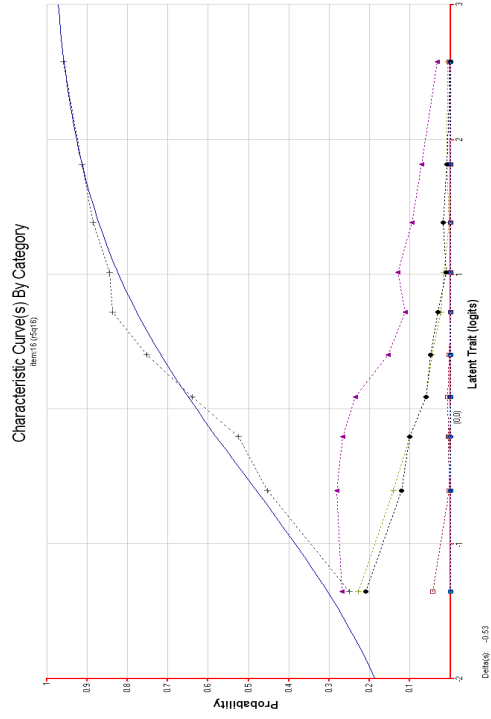
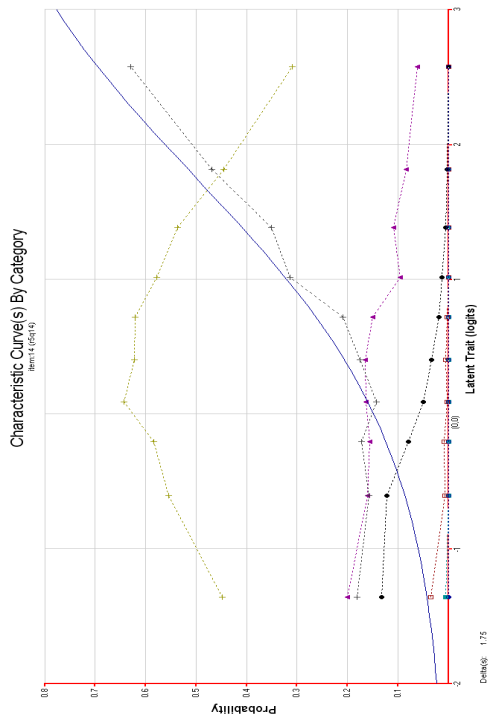


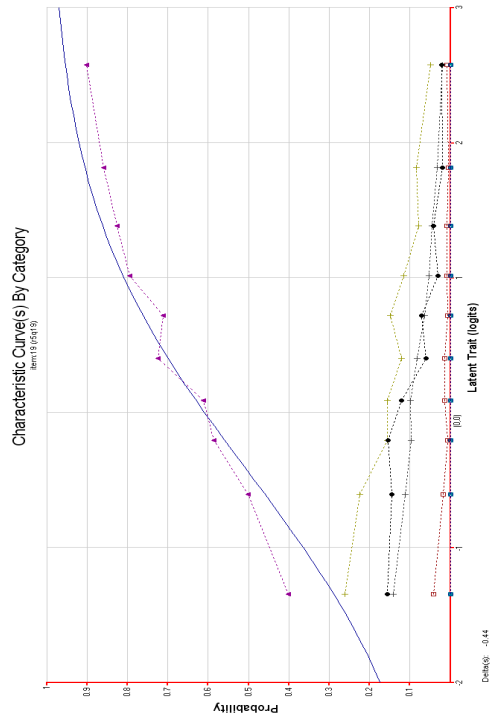
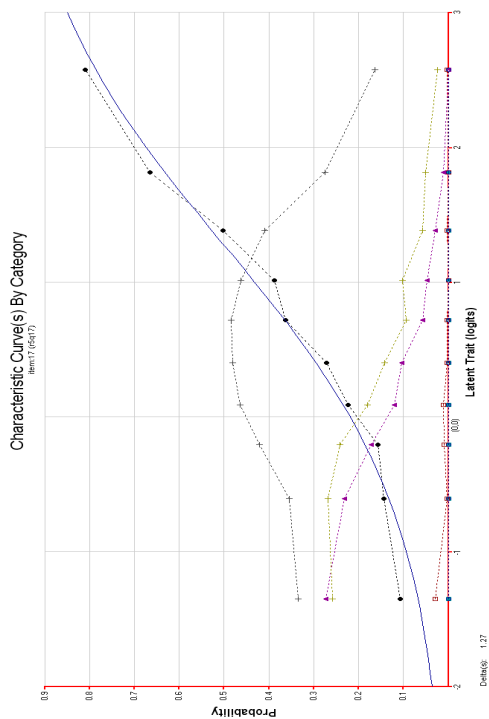
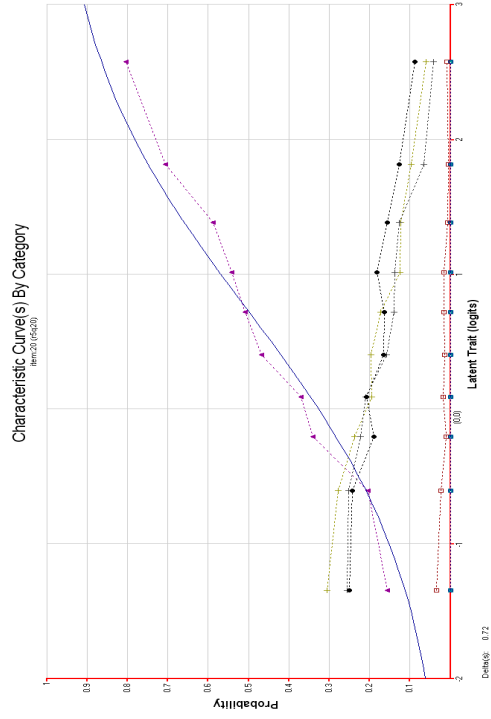
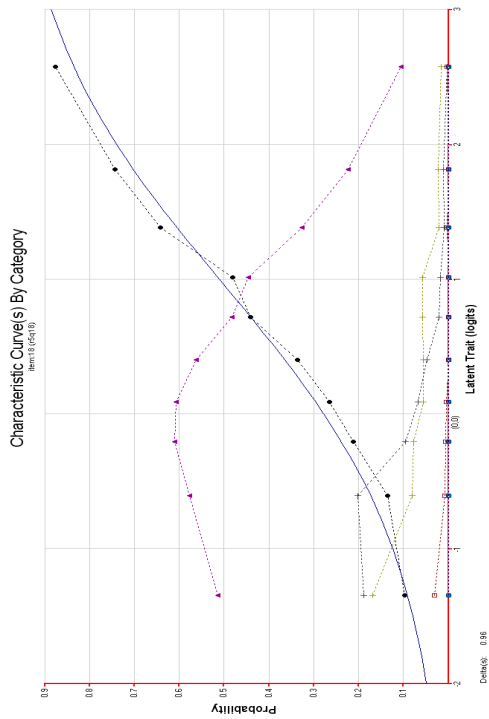
Year 5 Reading

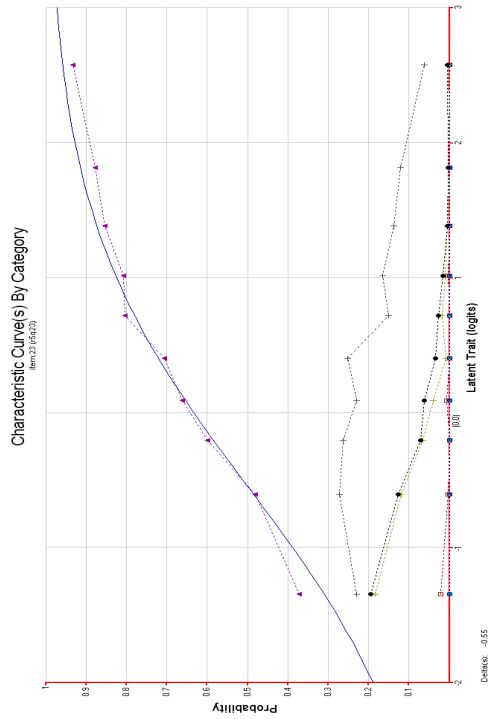
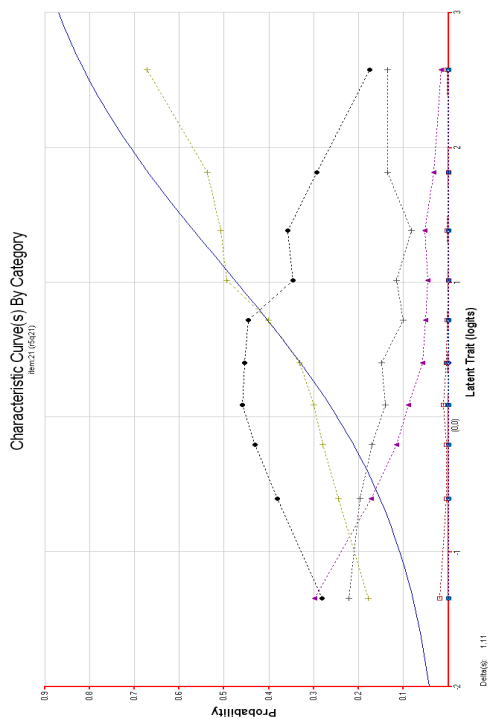
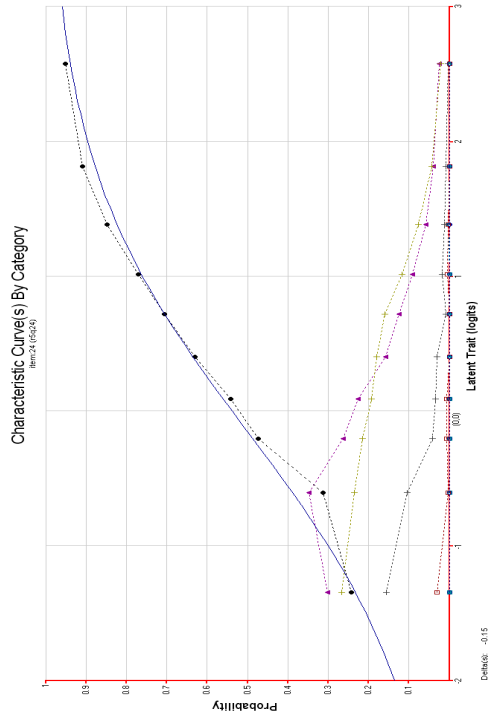
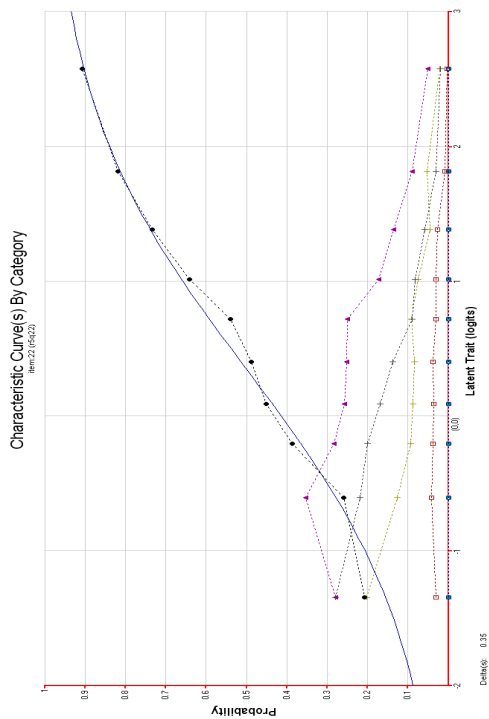


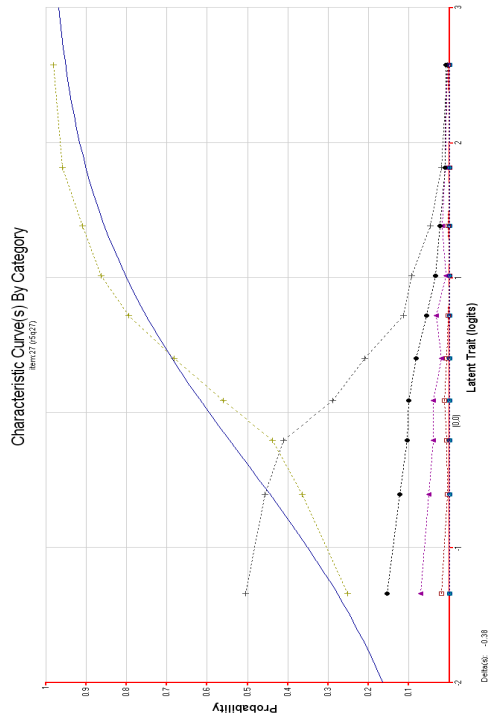
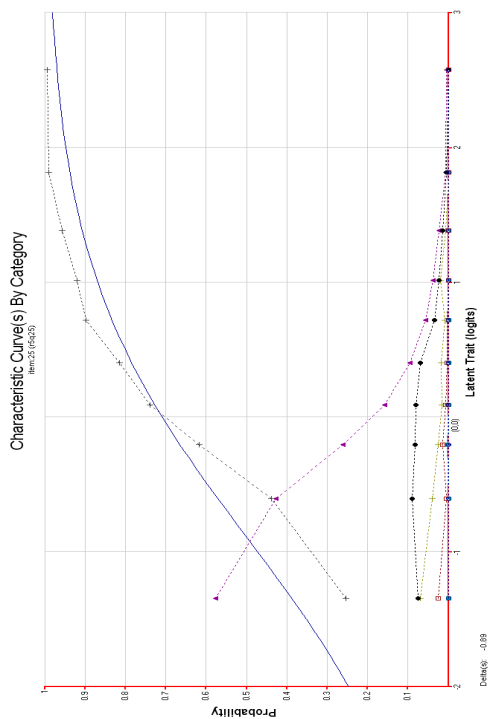
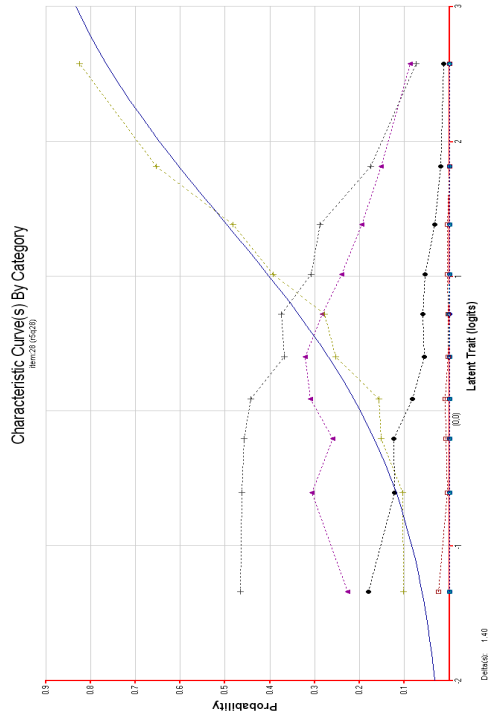
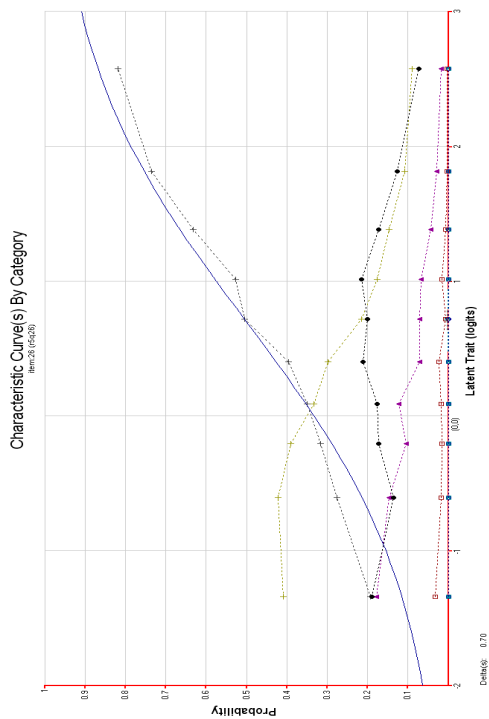


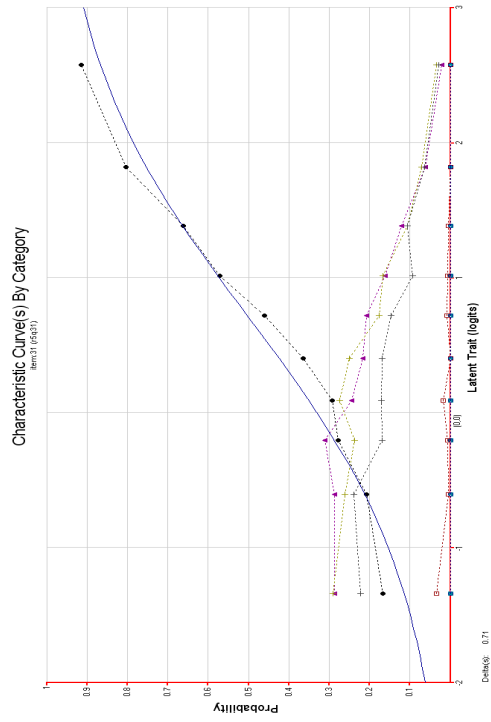
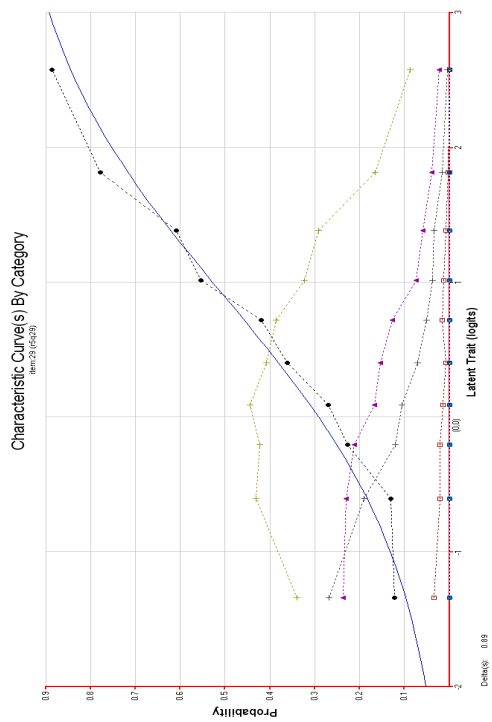
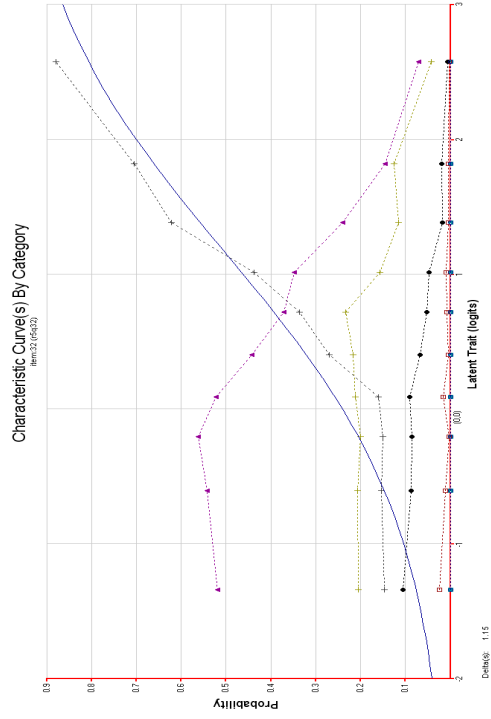
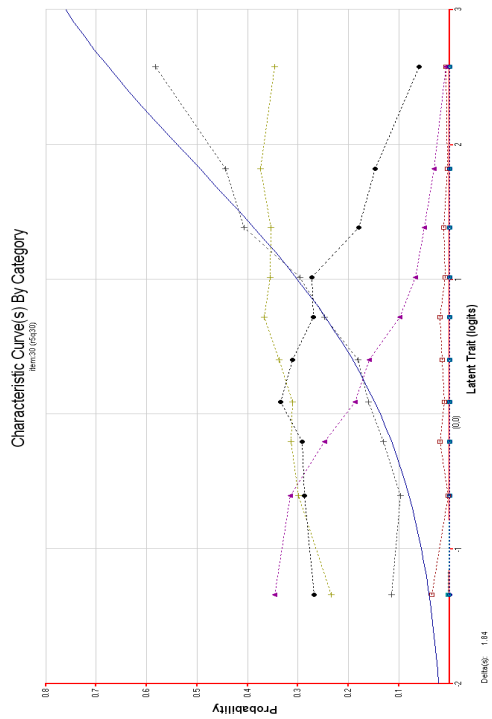


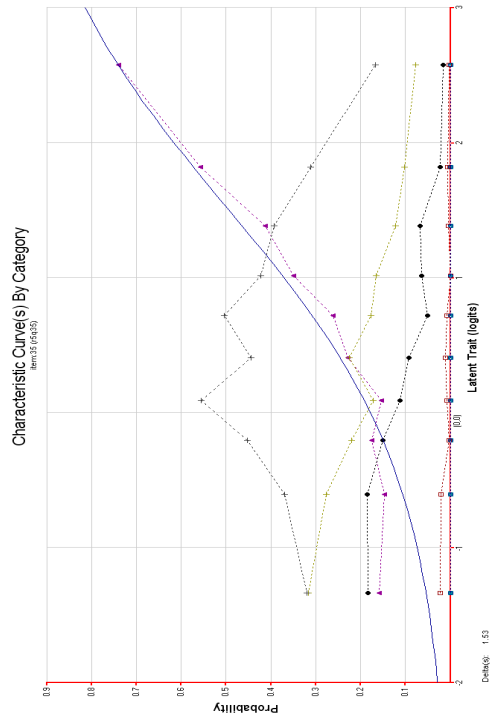
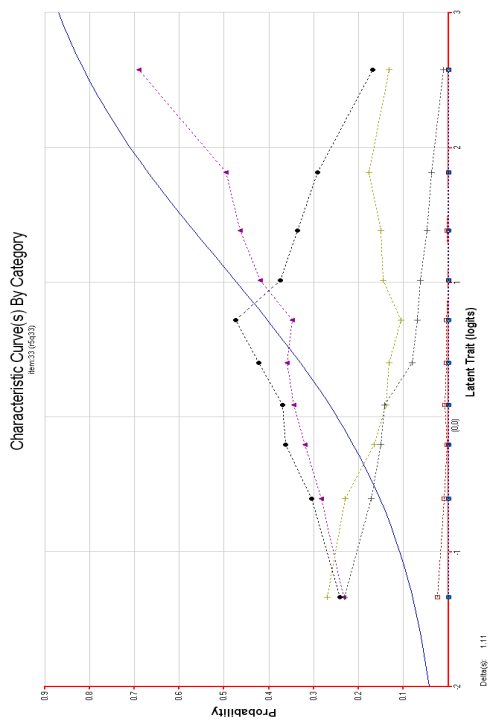
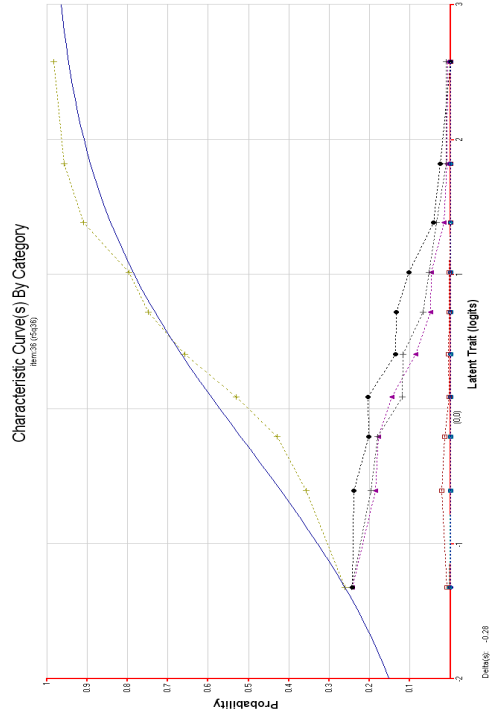
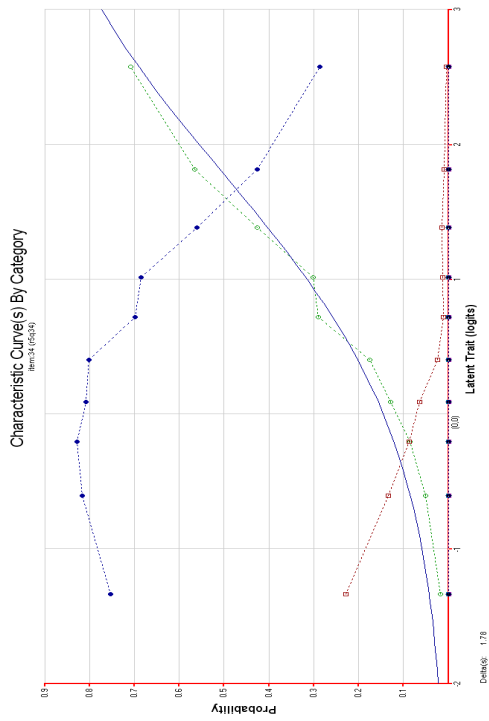


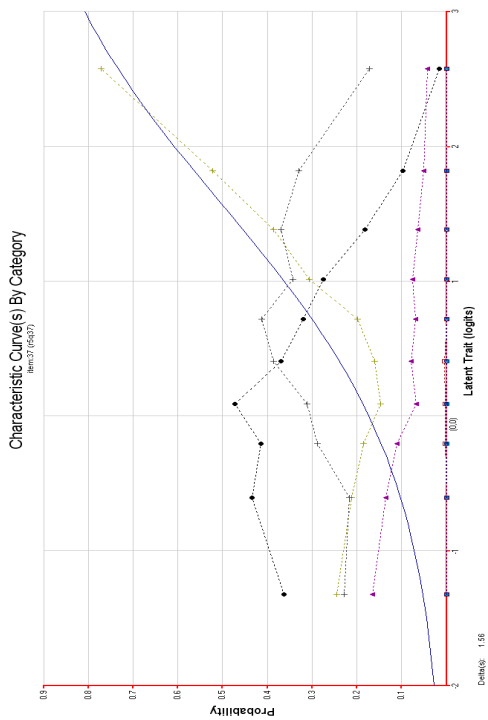




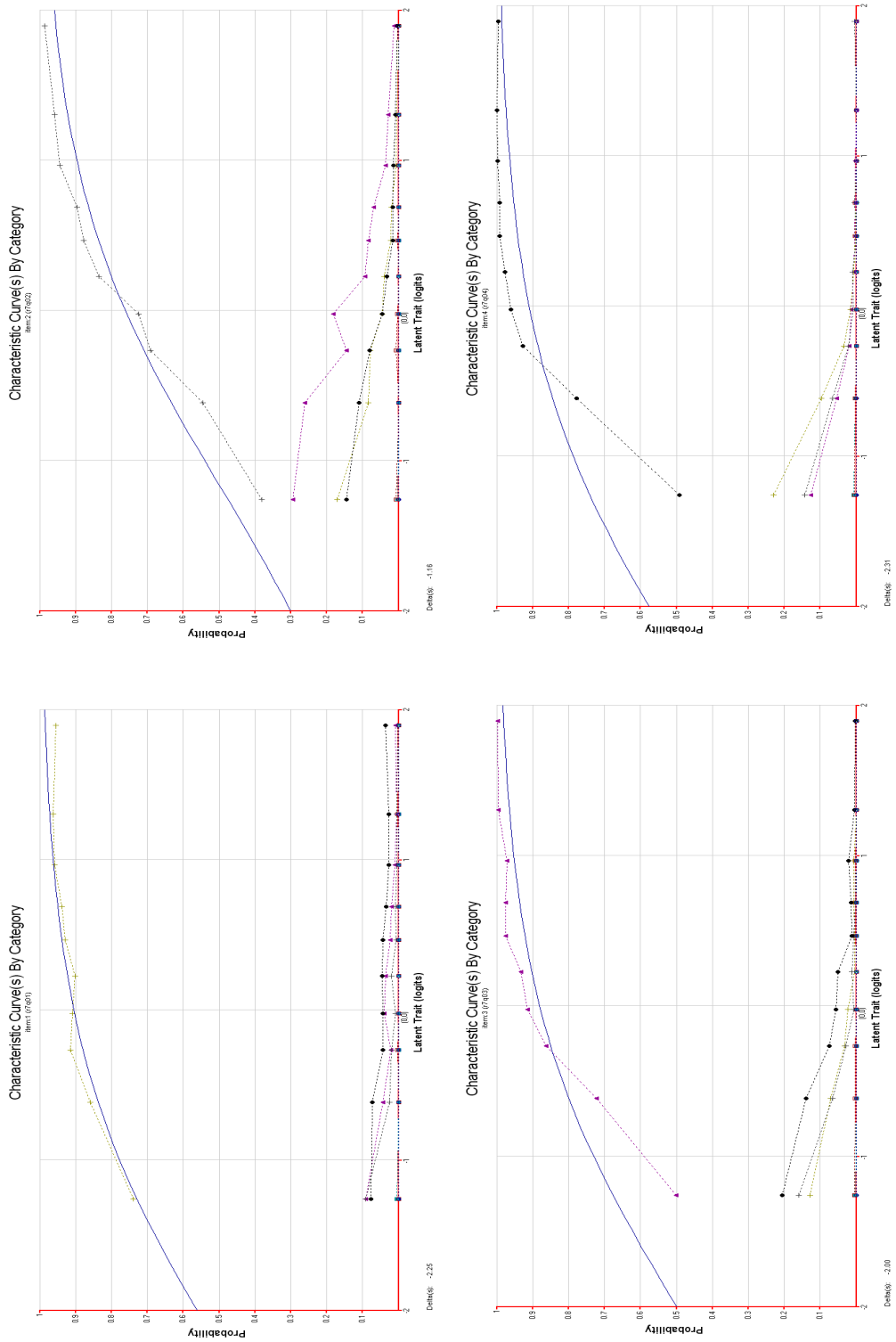


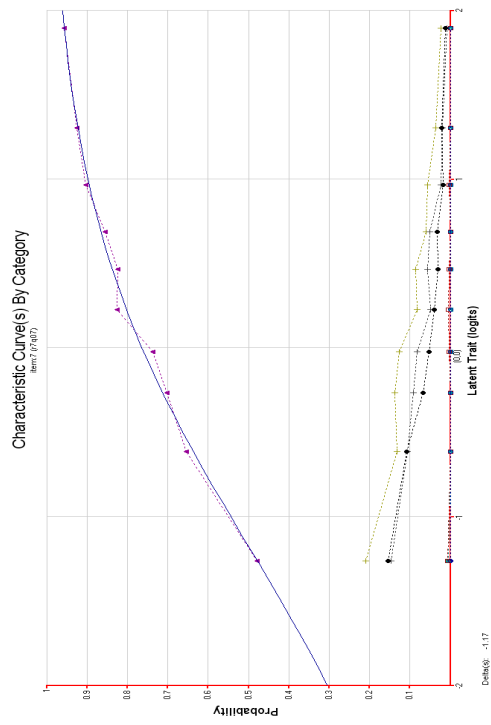
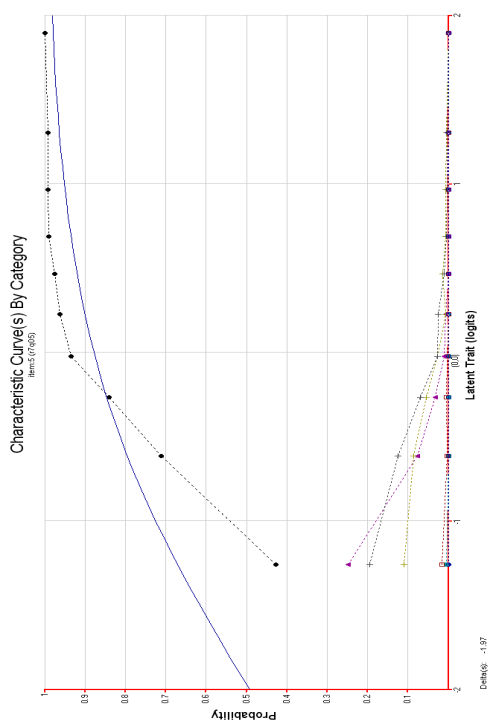
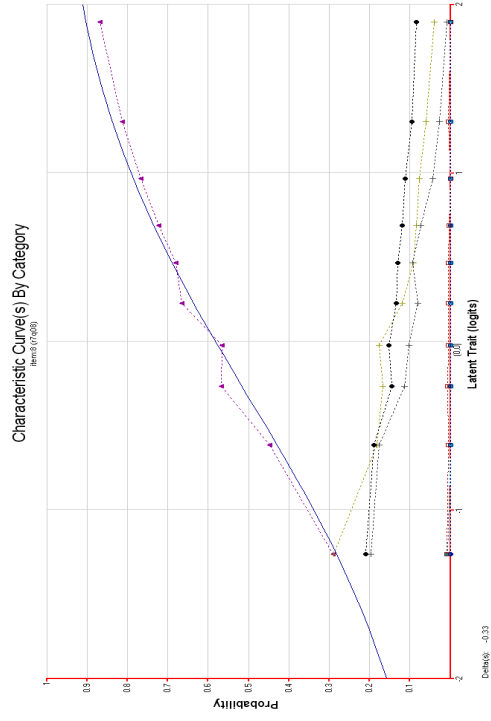
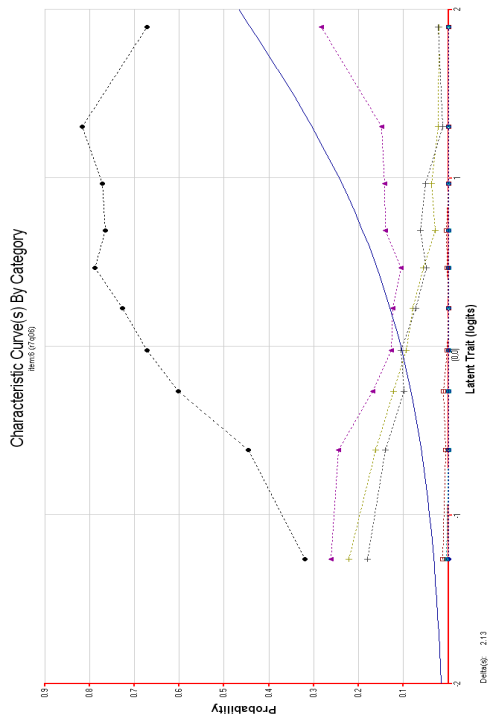


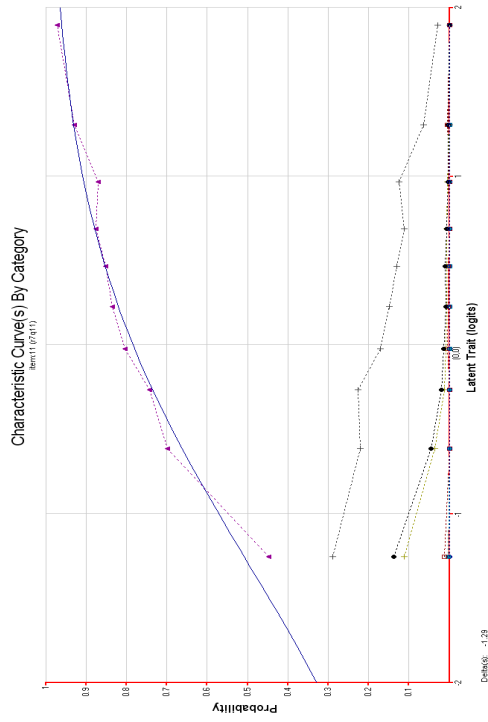
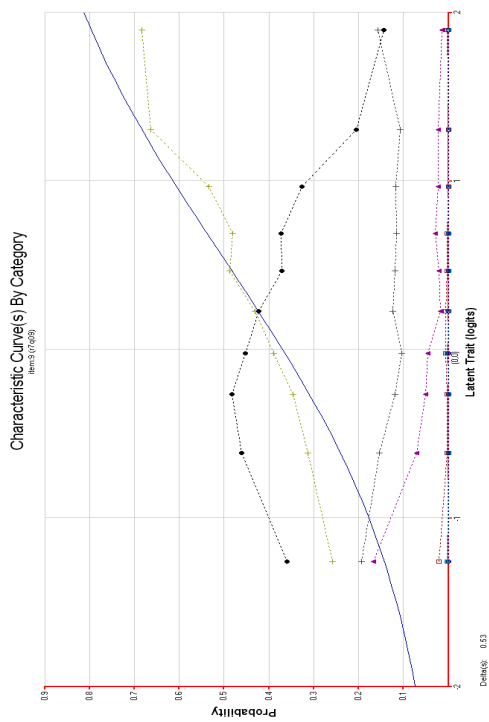
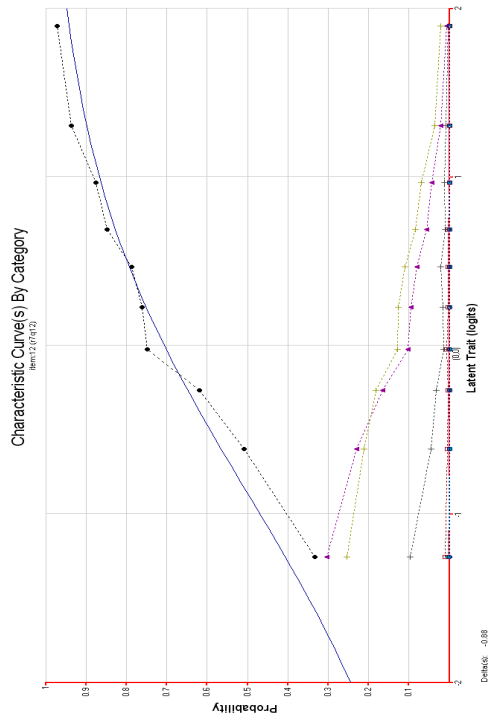
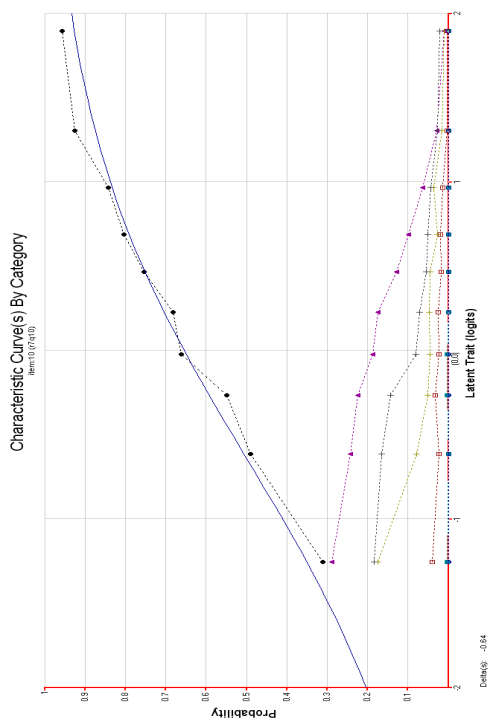


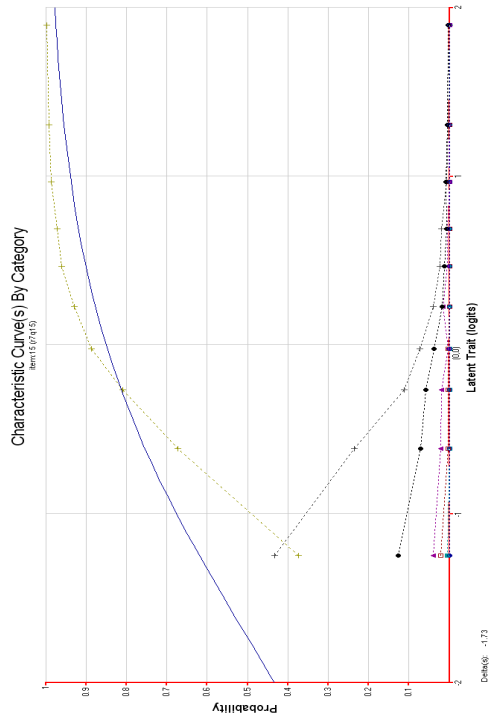
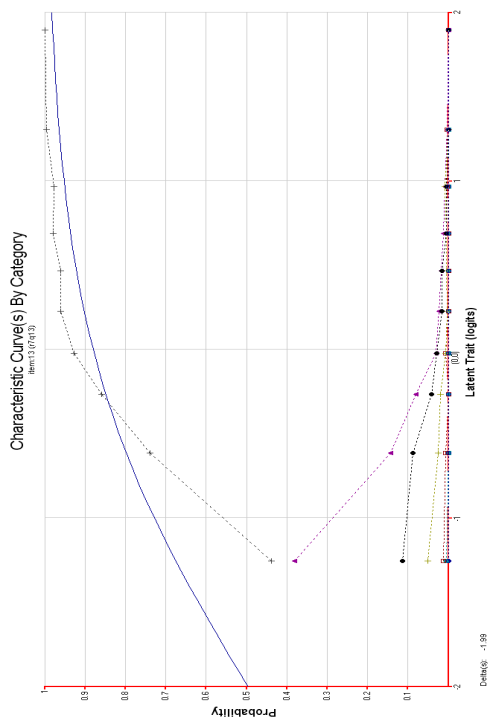
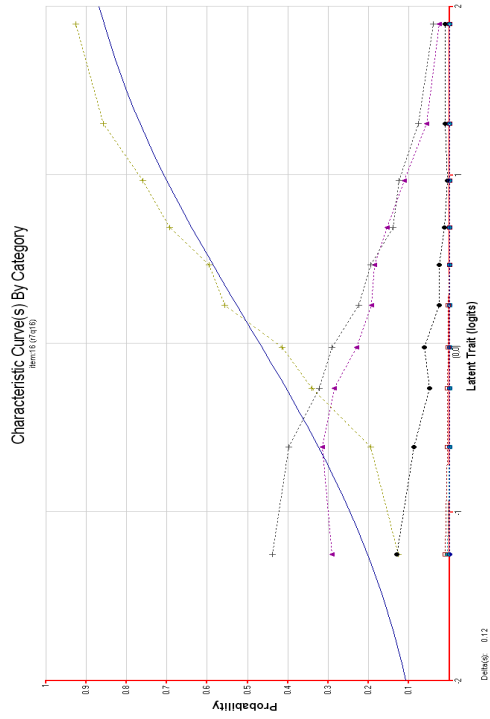
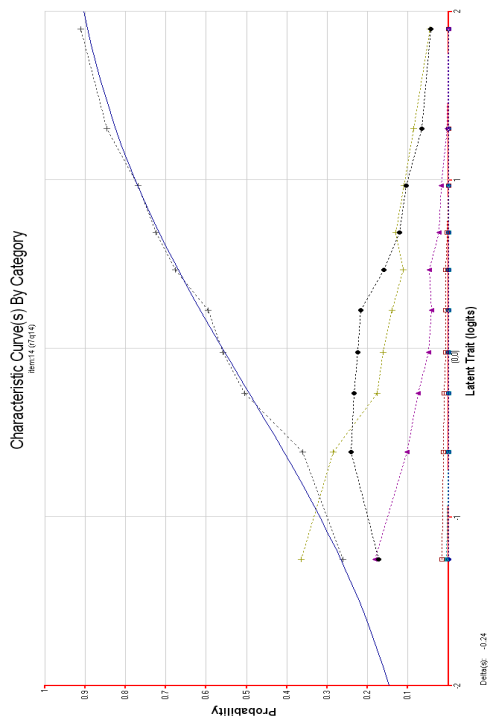


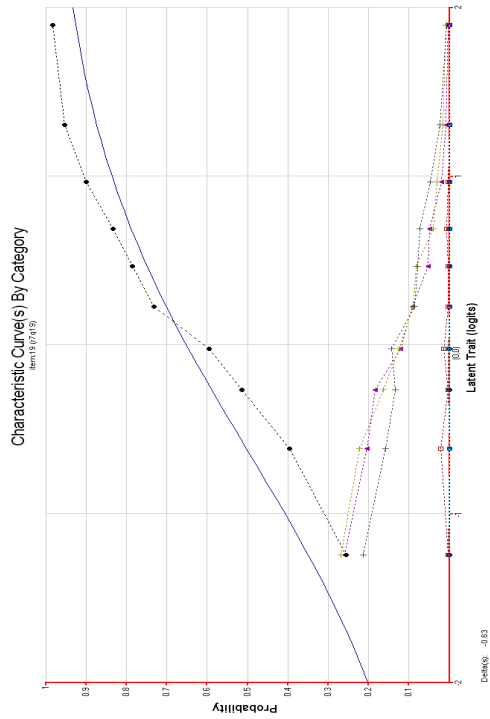
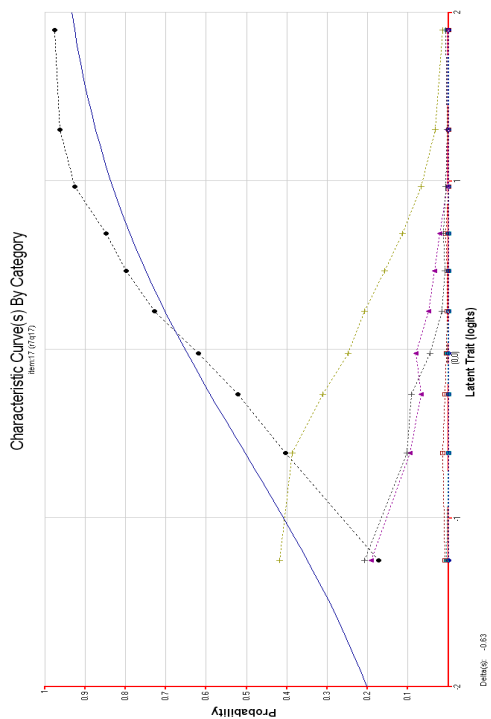
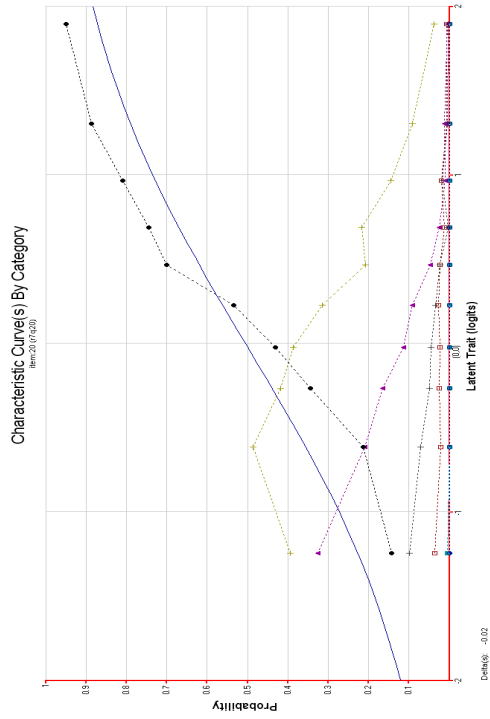
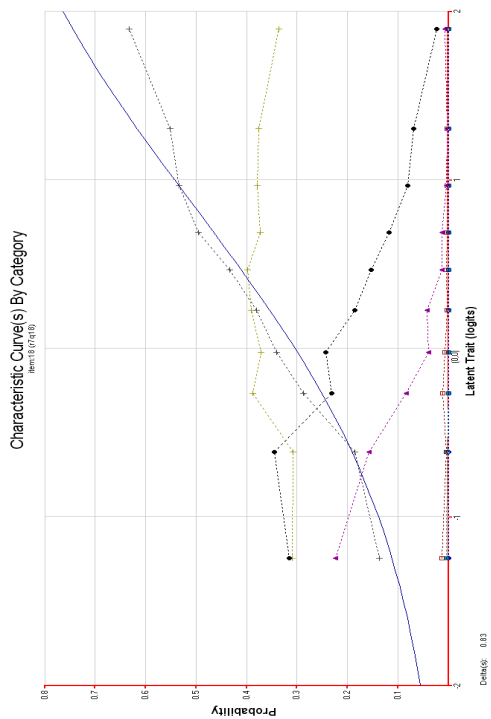
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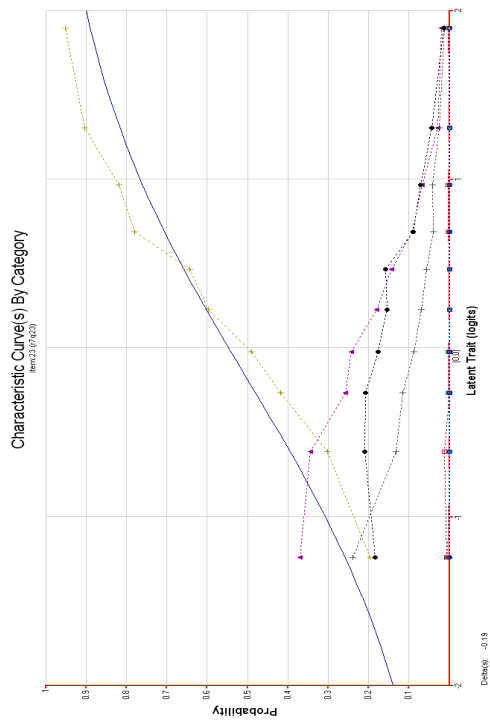
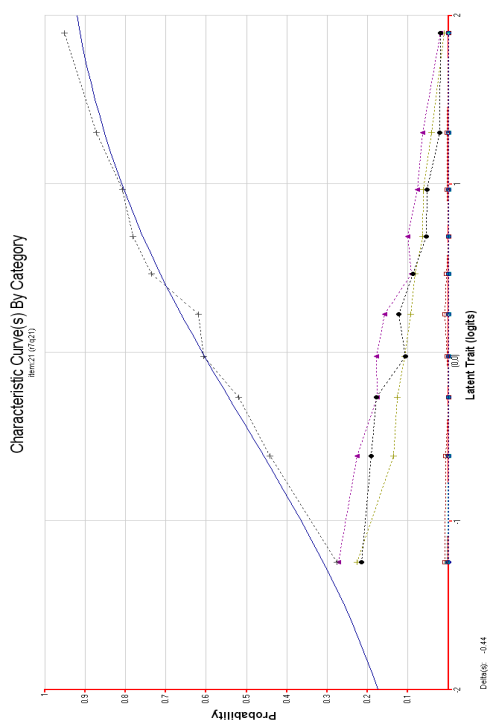
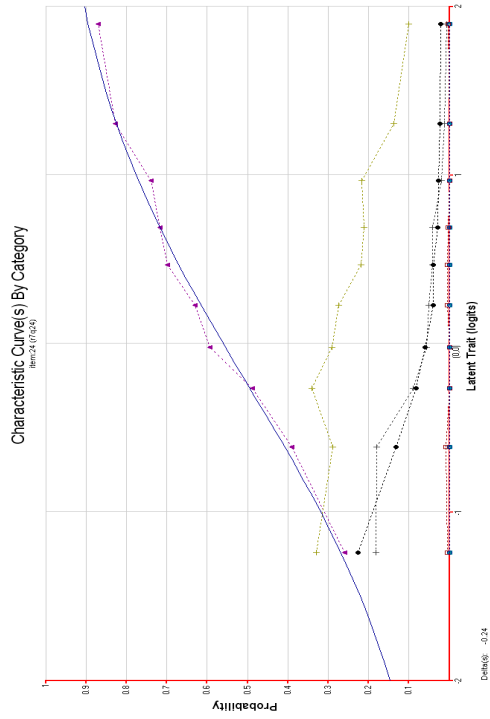
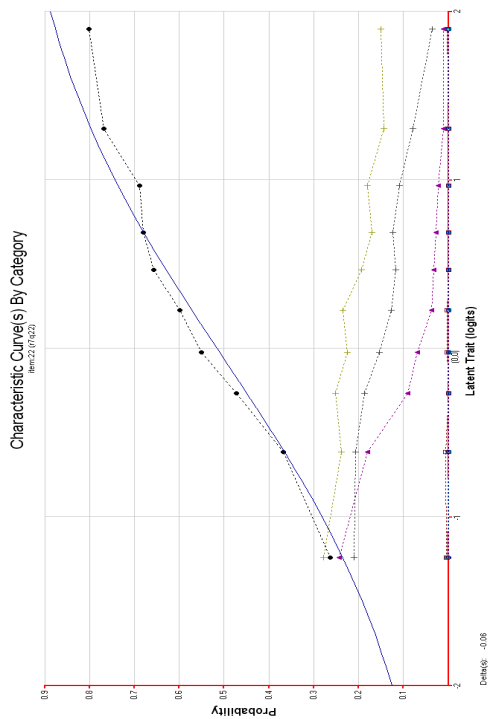


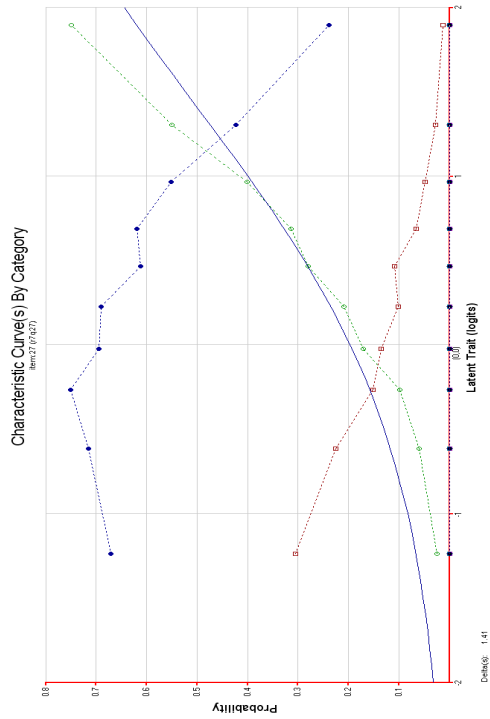
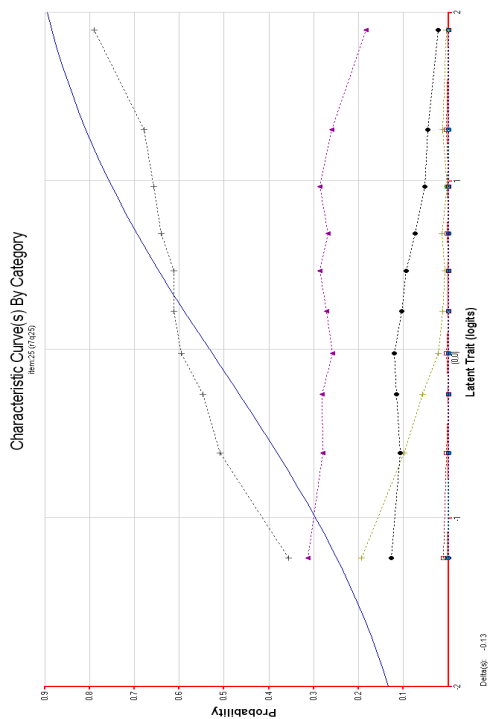
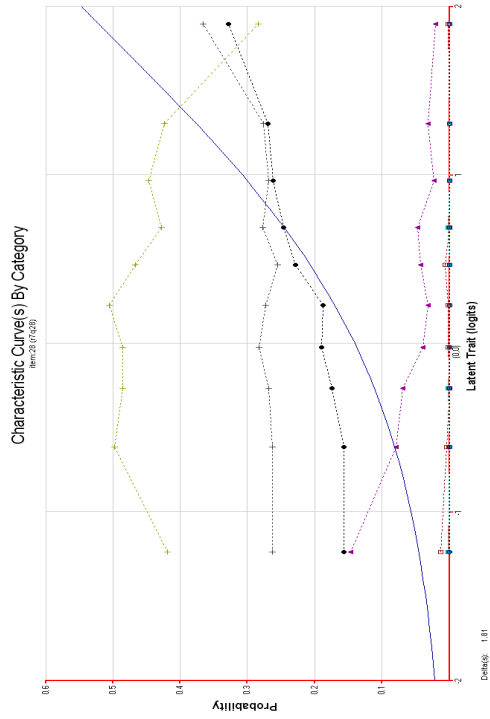
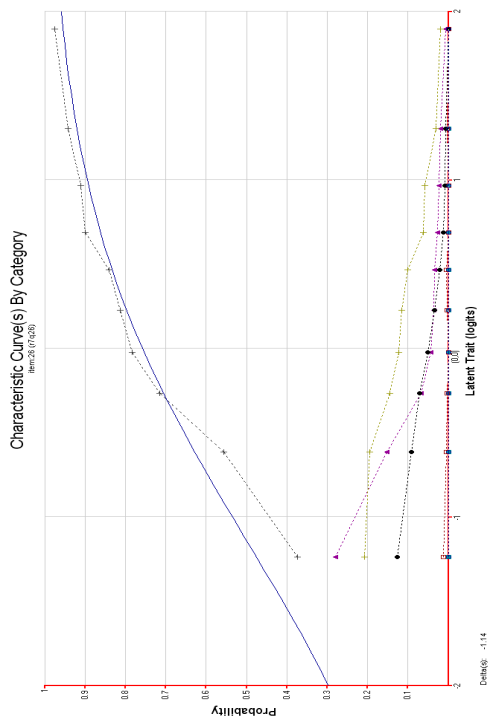


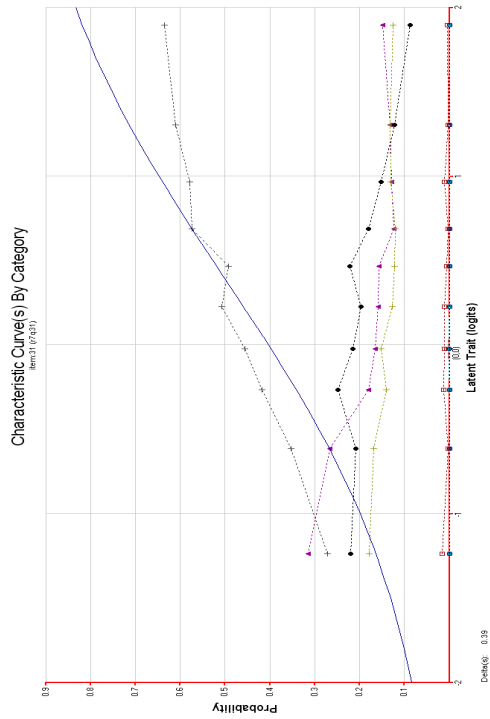
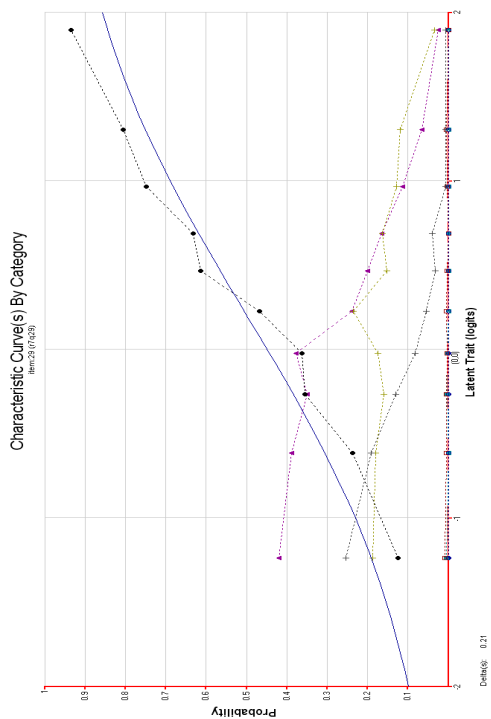
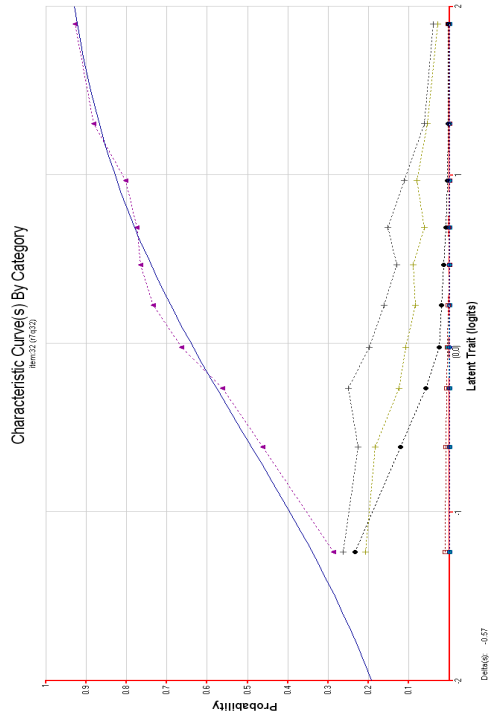
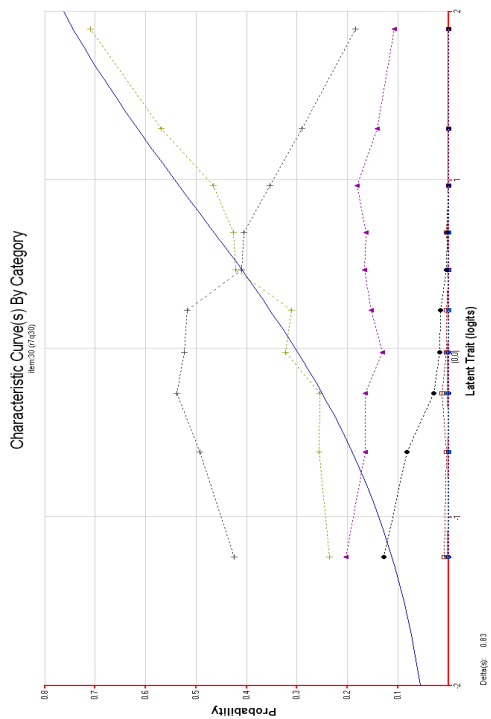


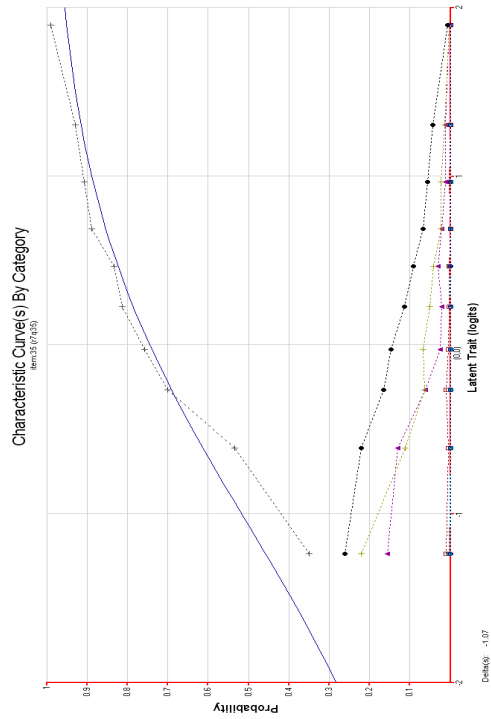
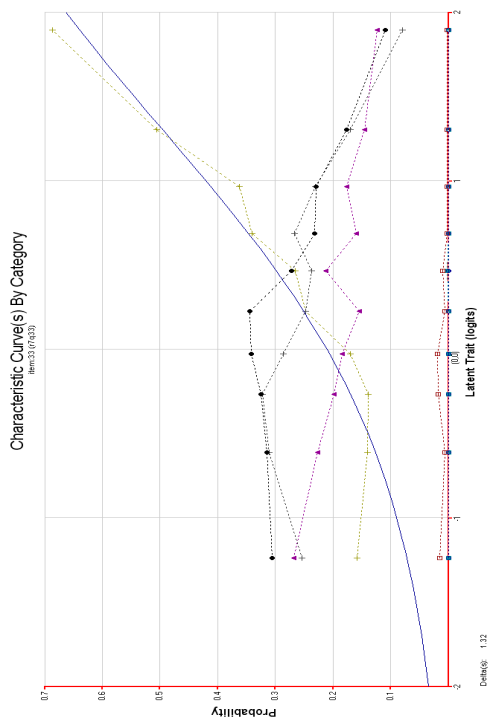
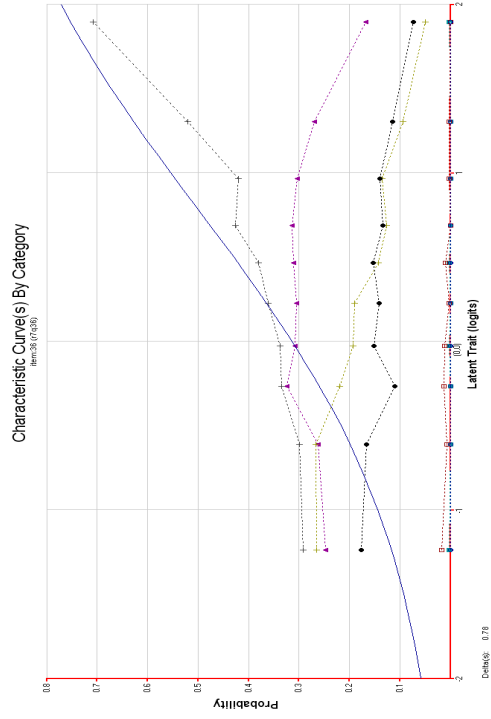
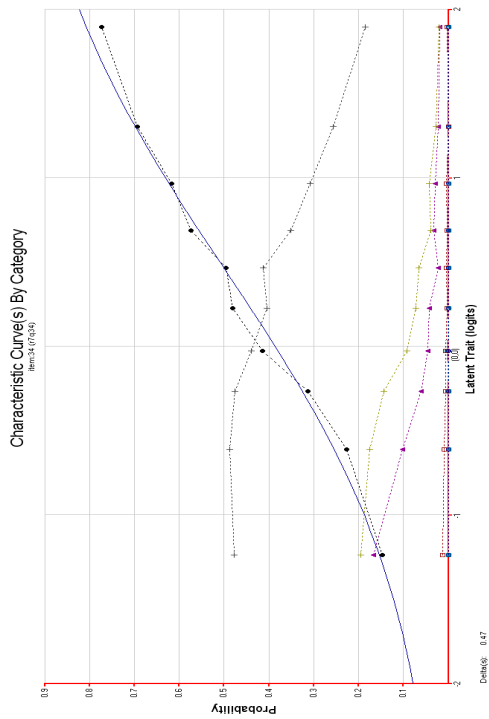


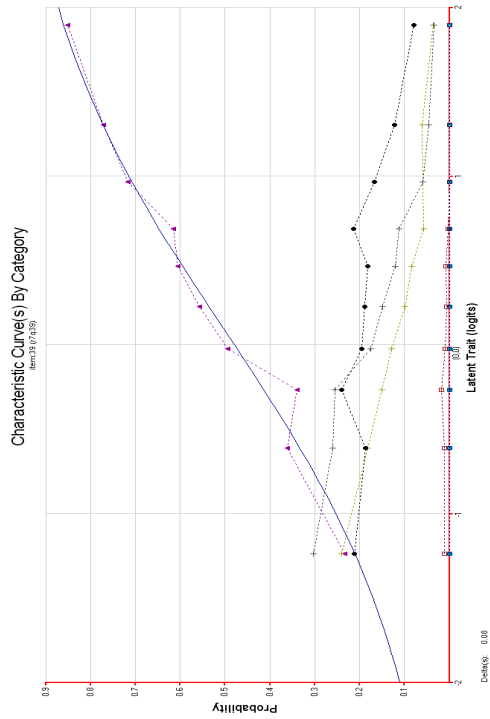
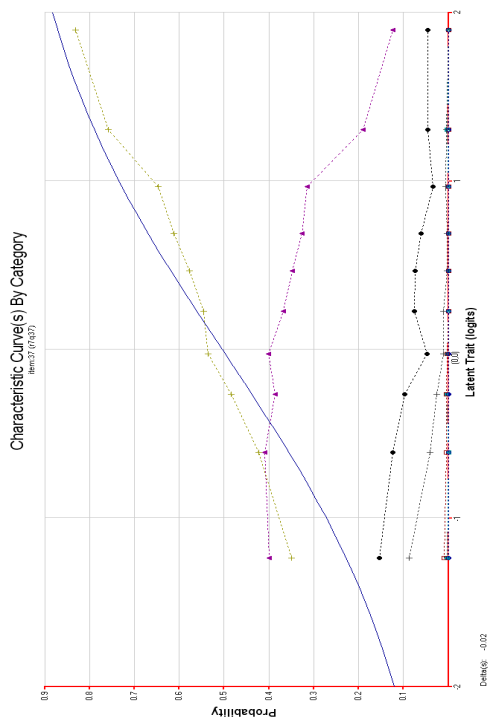
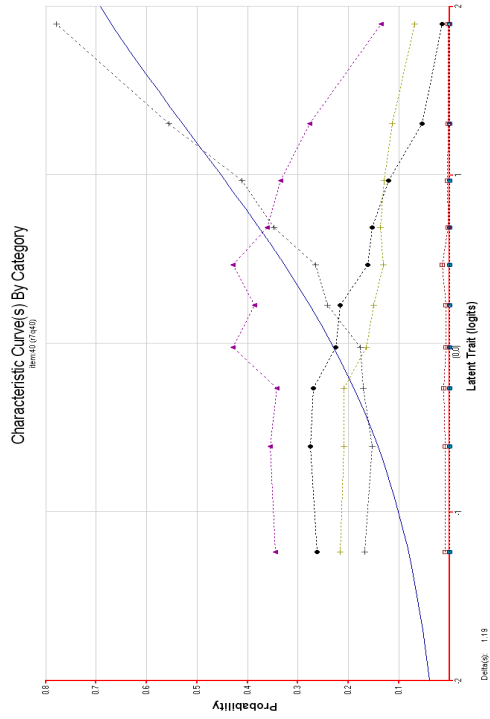
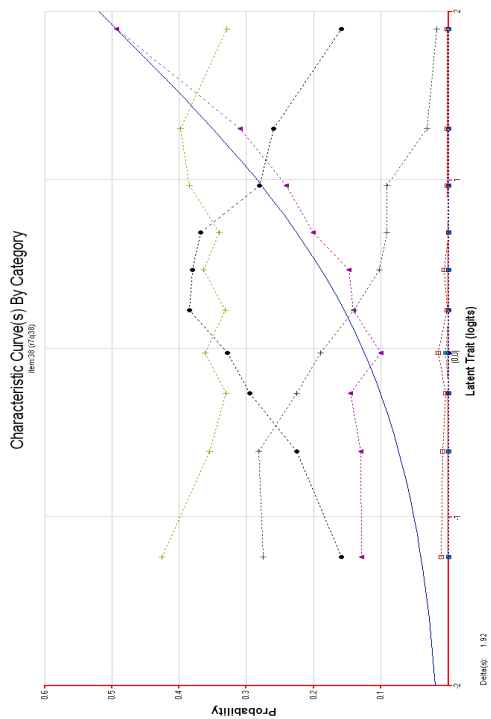


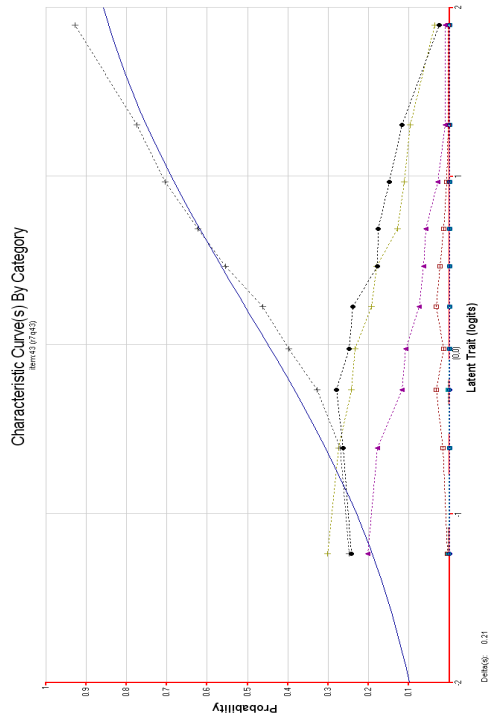
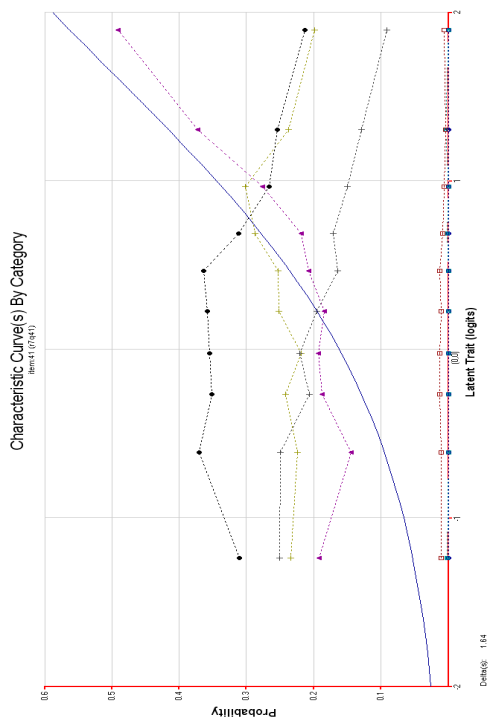
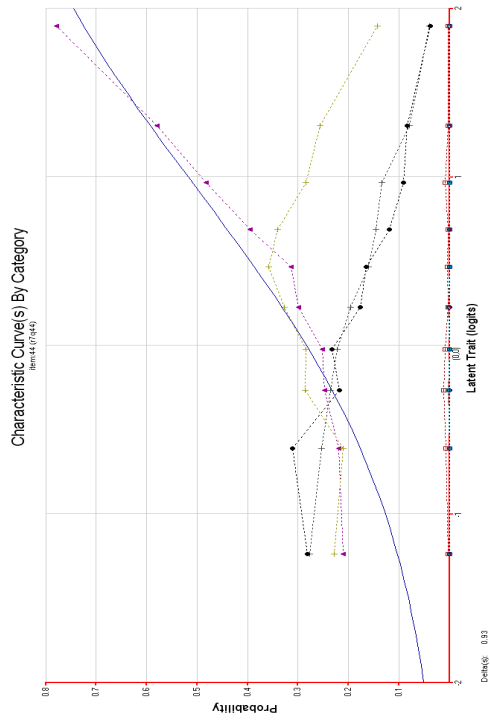
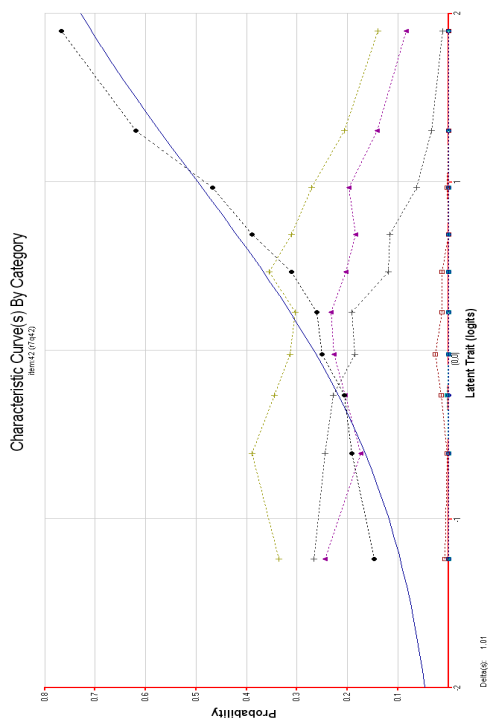


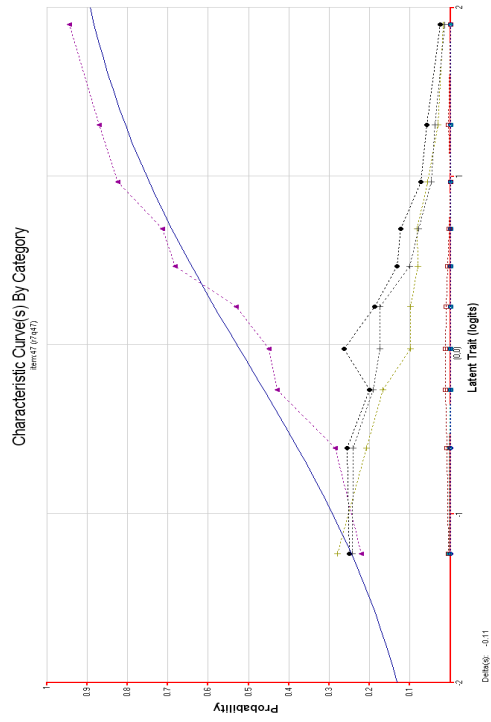
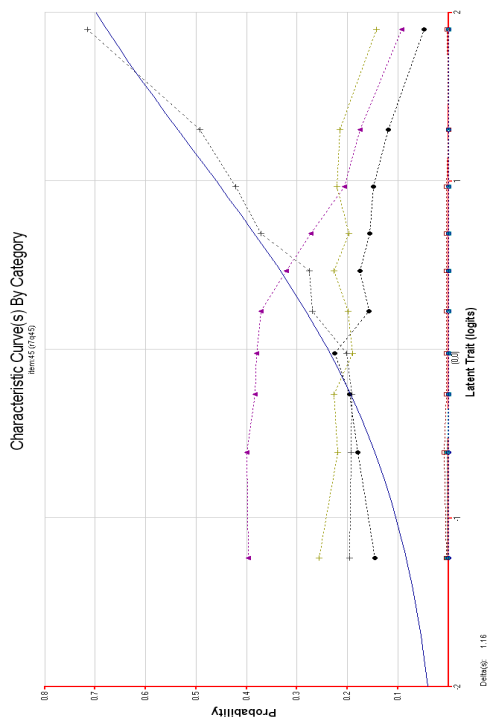
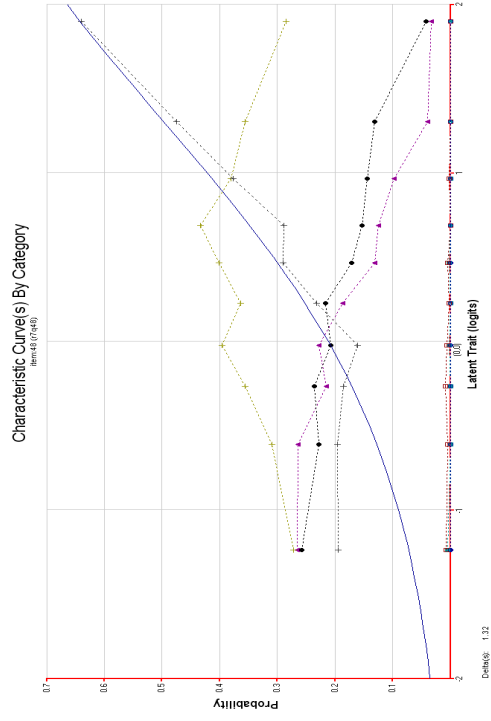
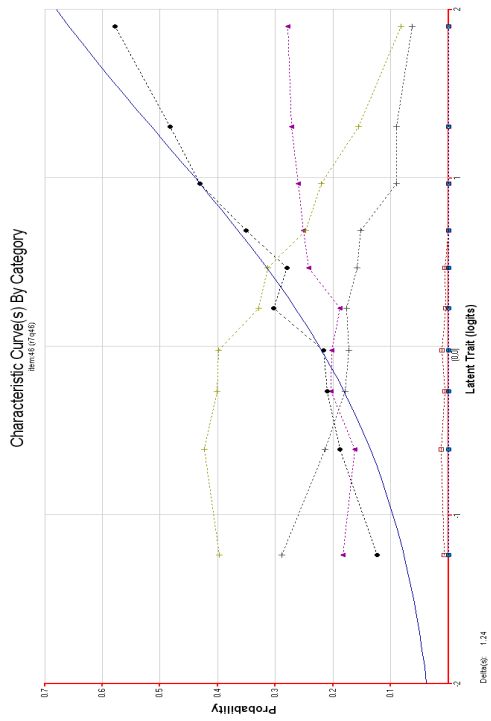


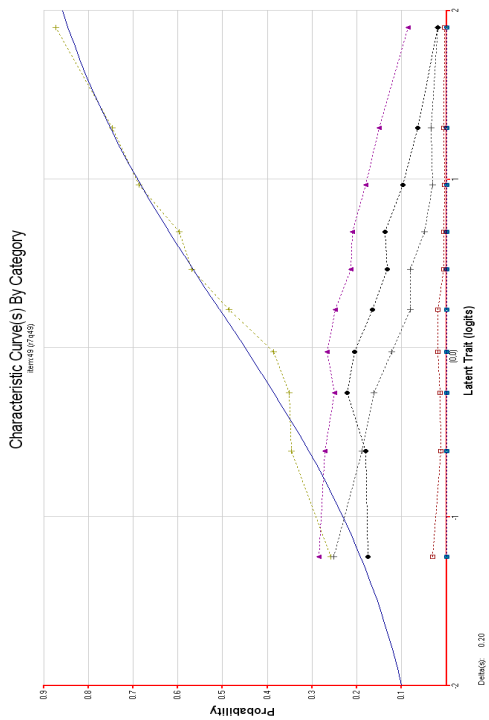
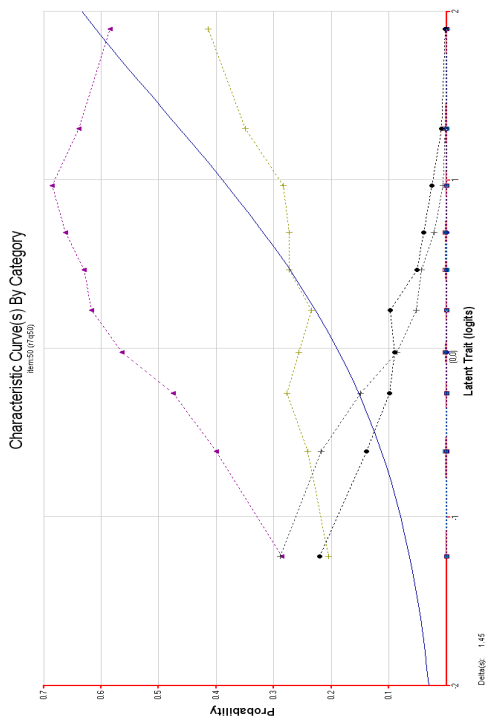




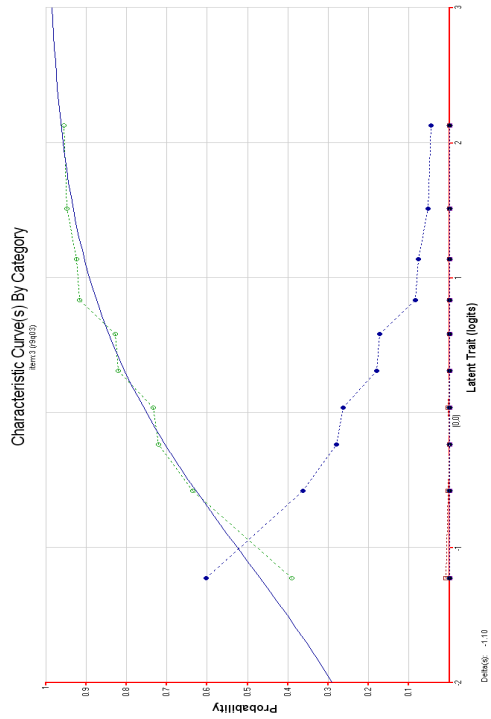
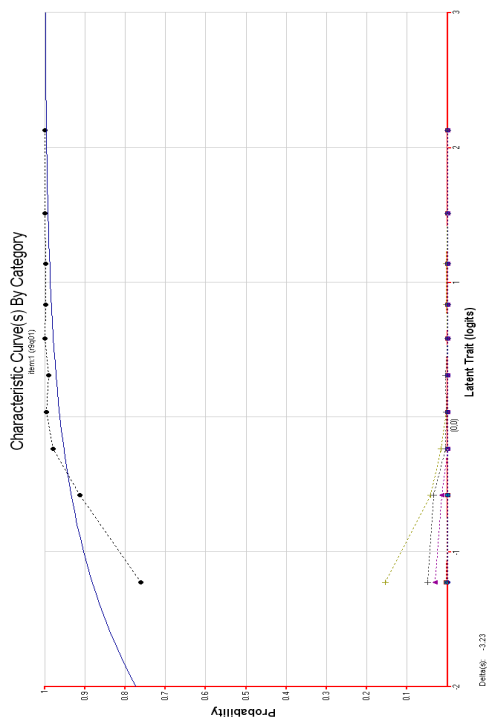
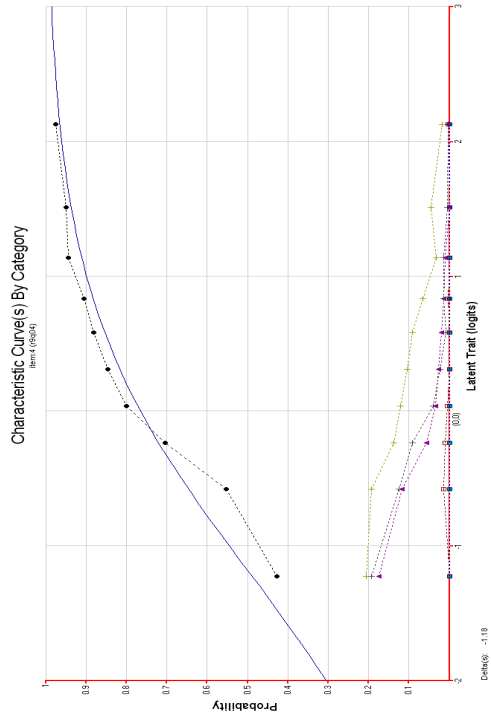
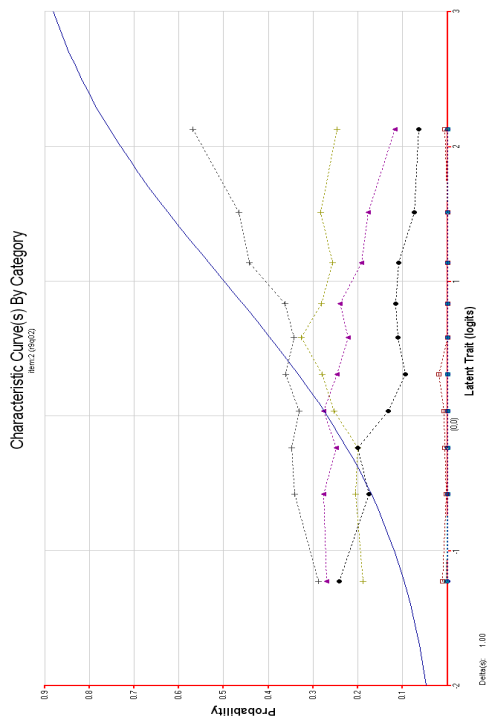


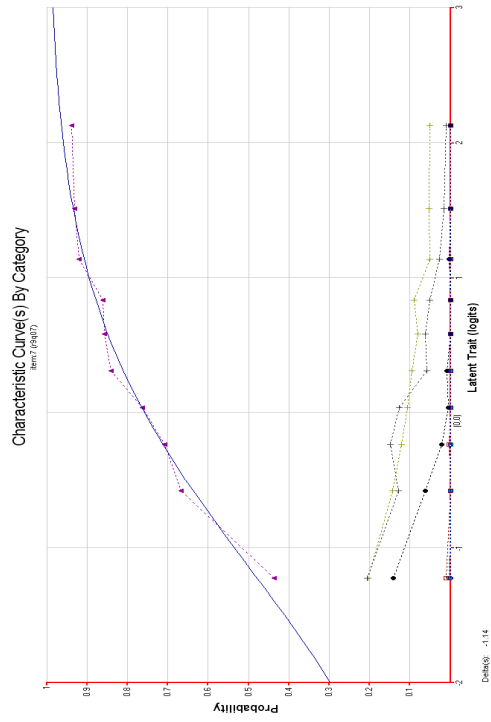
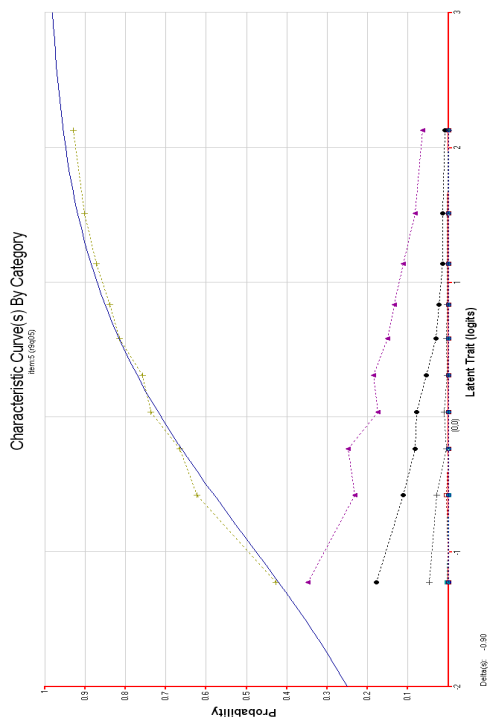
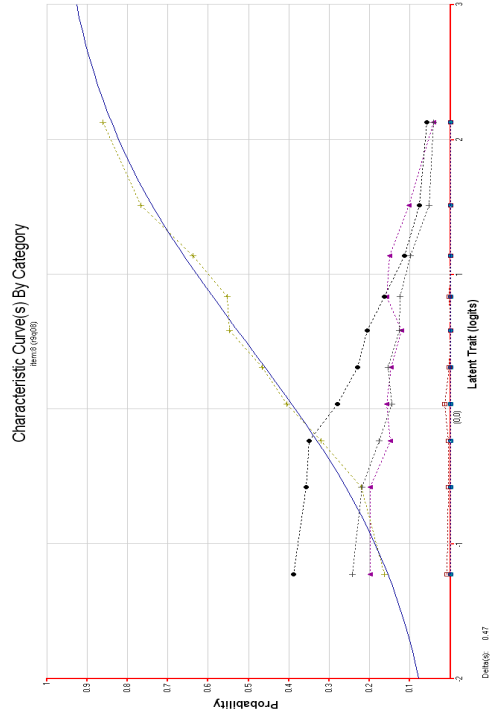
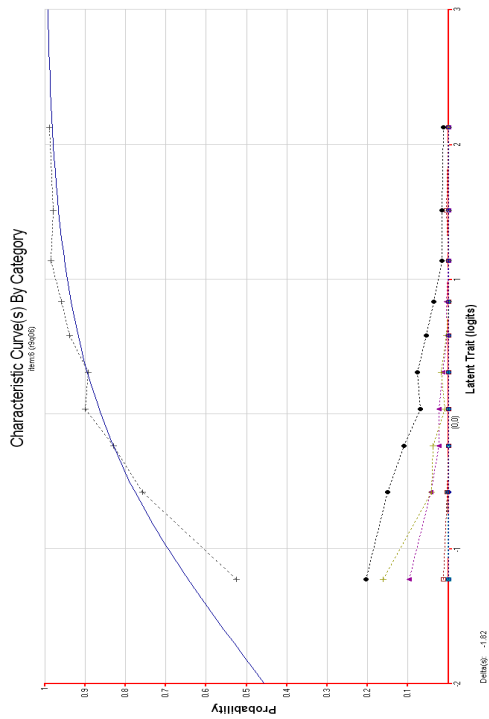


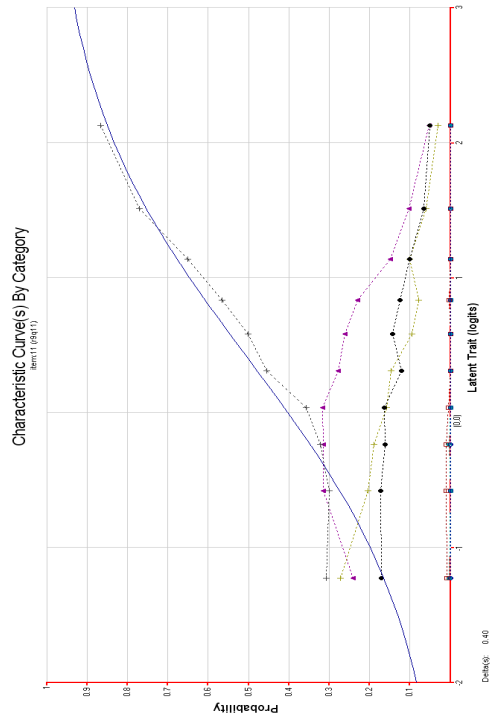
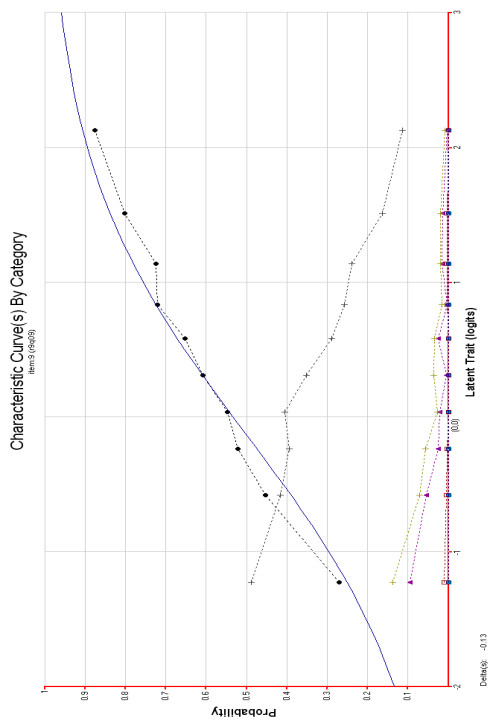
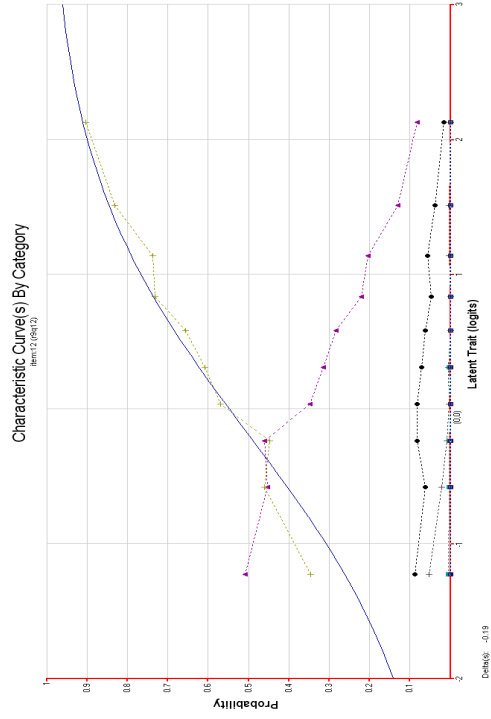
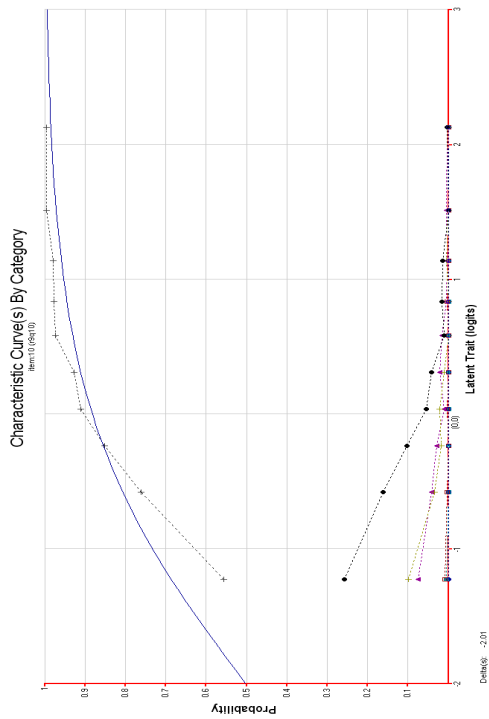


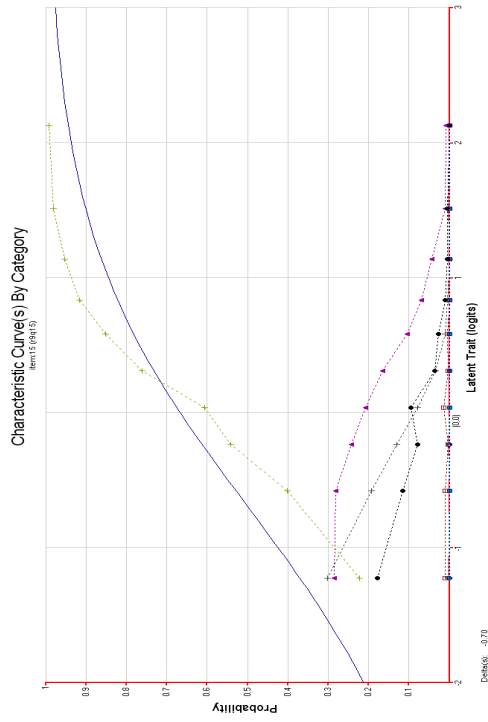
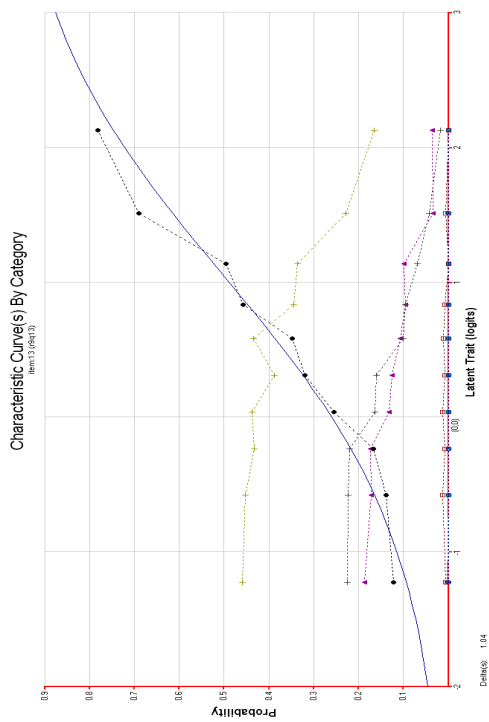
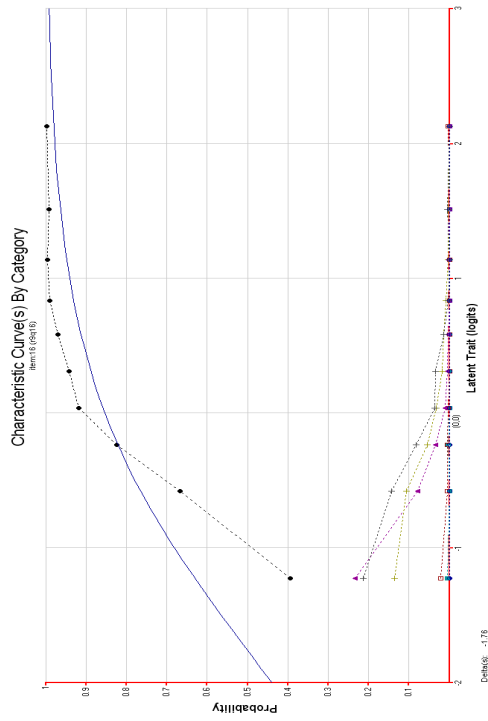
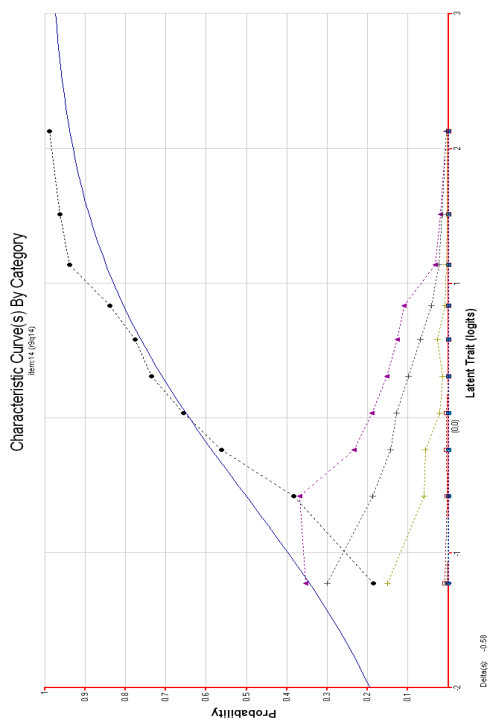


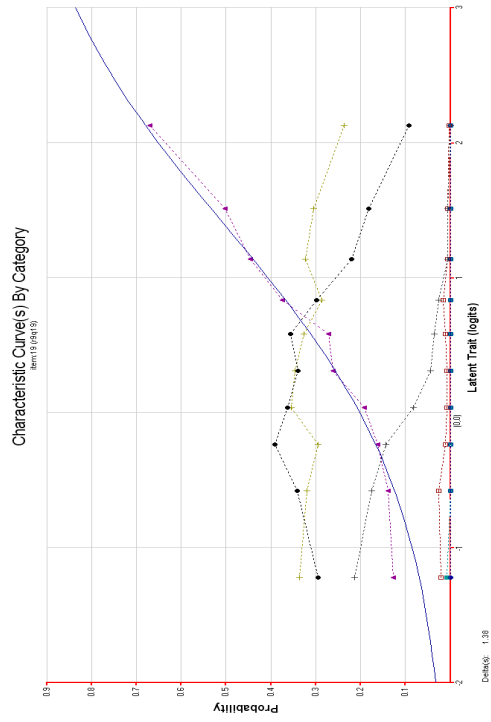
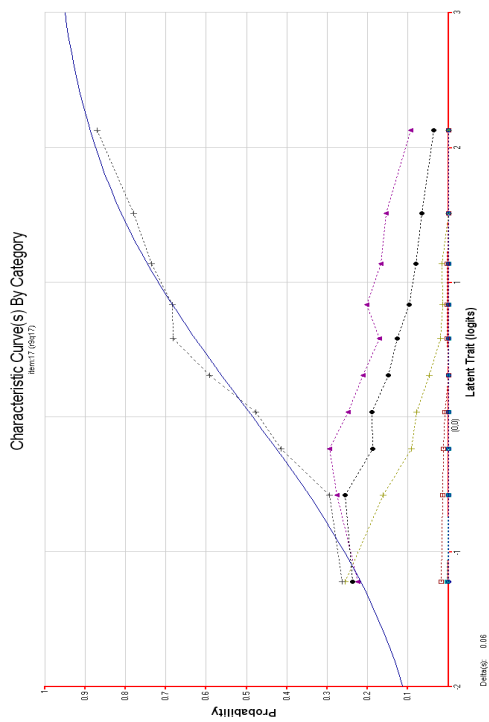
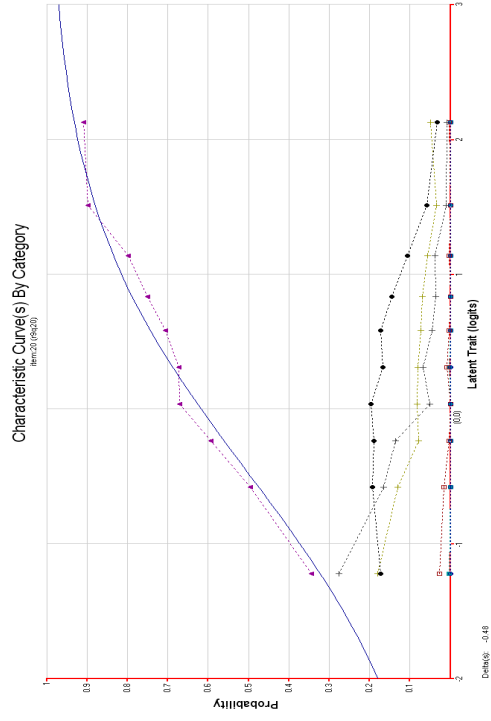
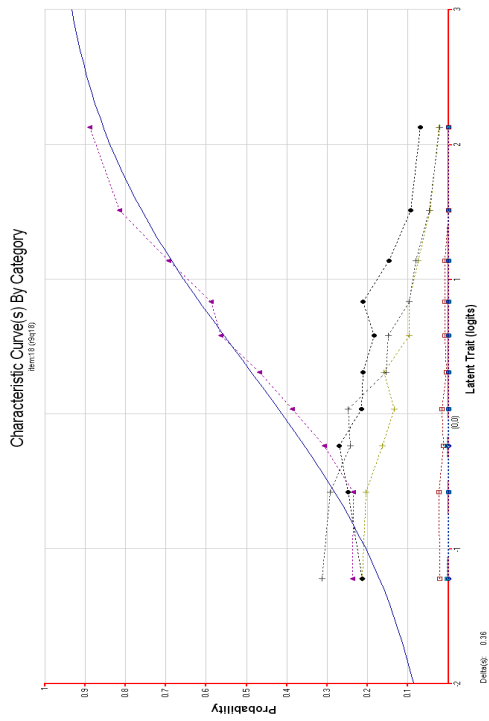
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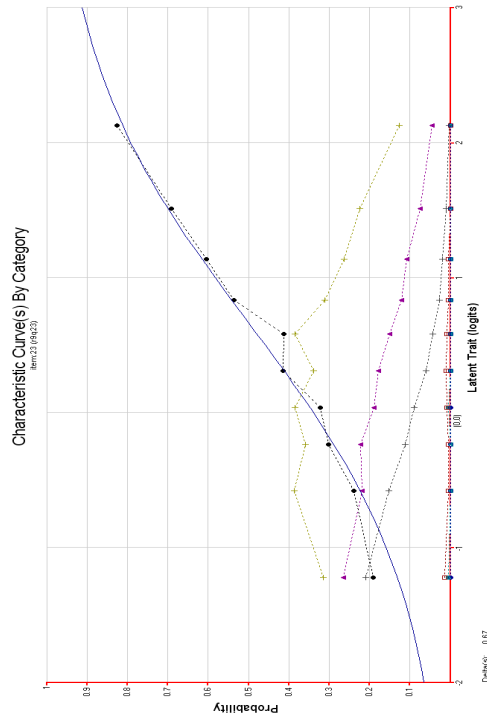
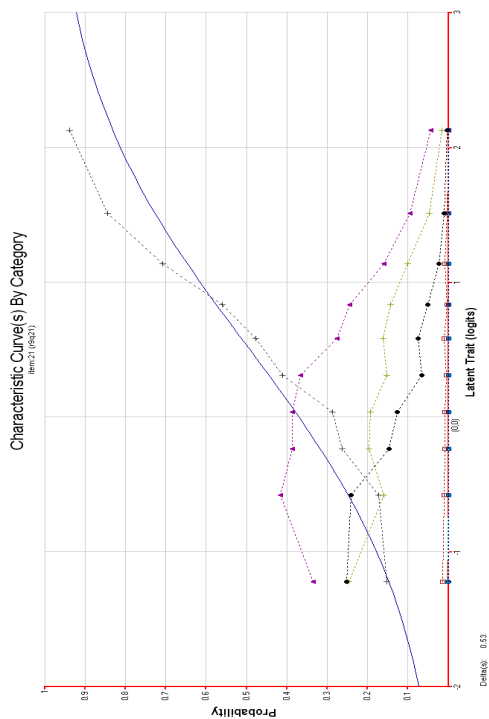
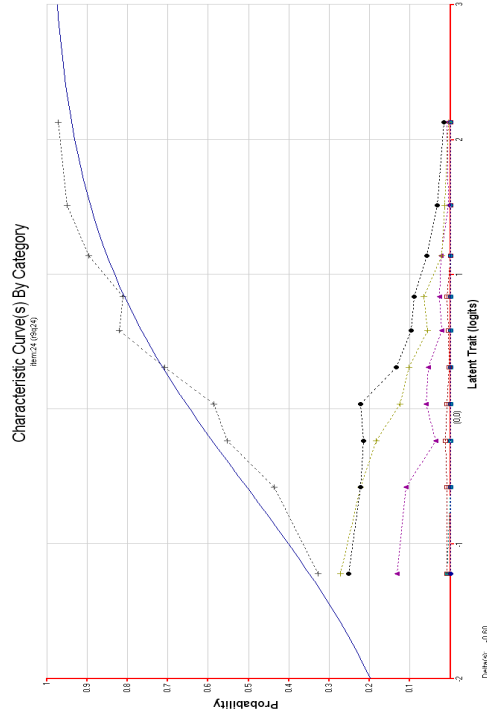
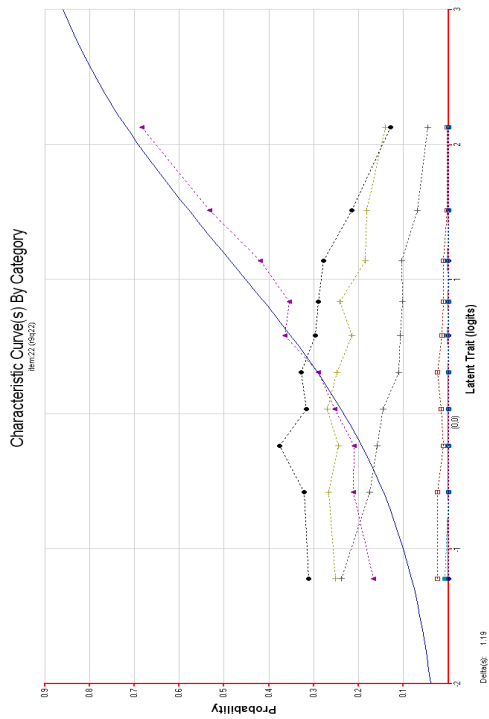


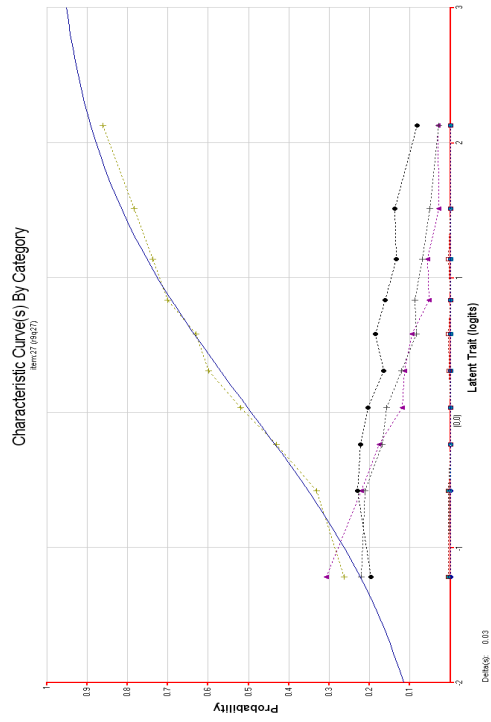
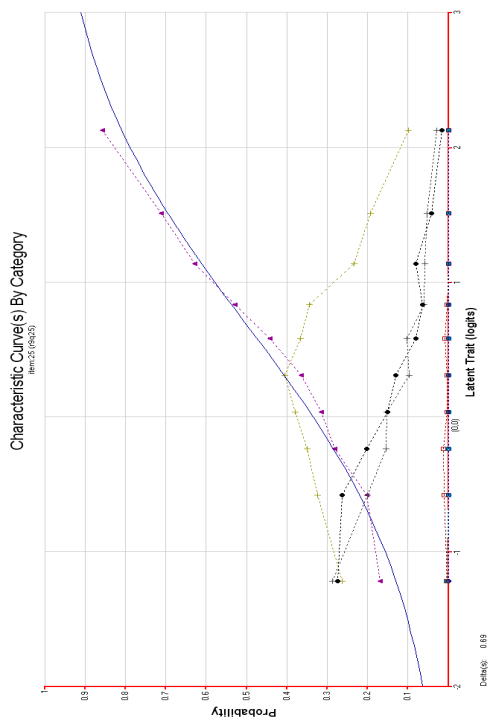
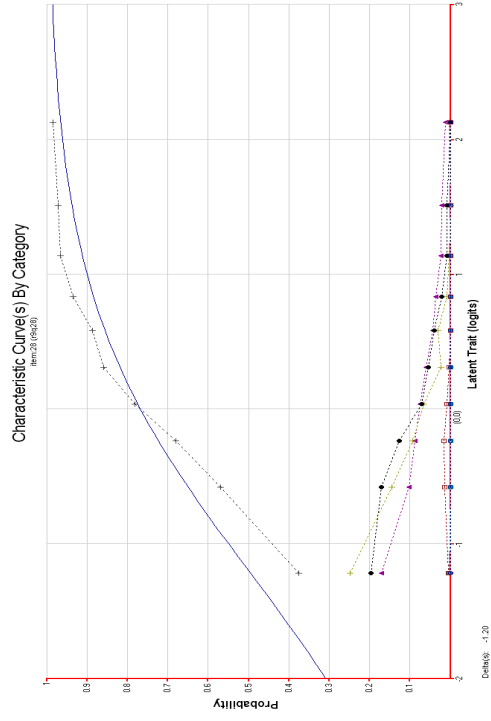
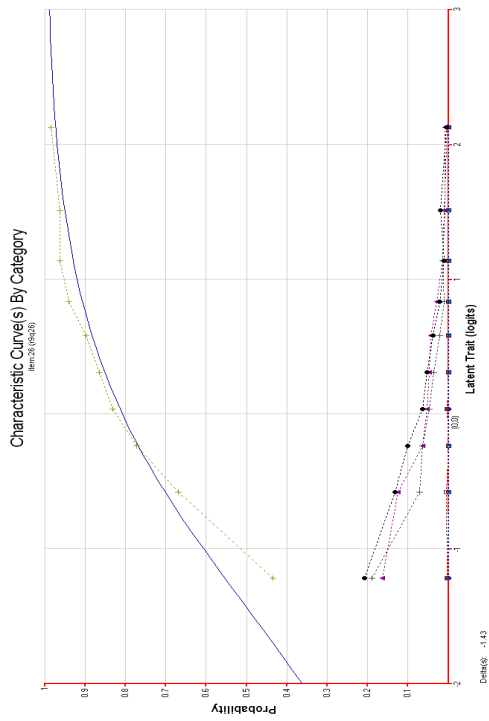


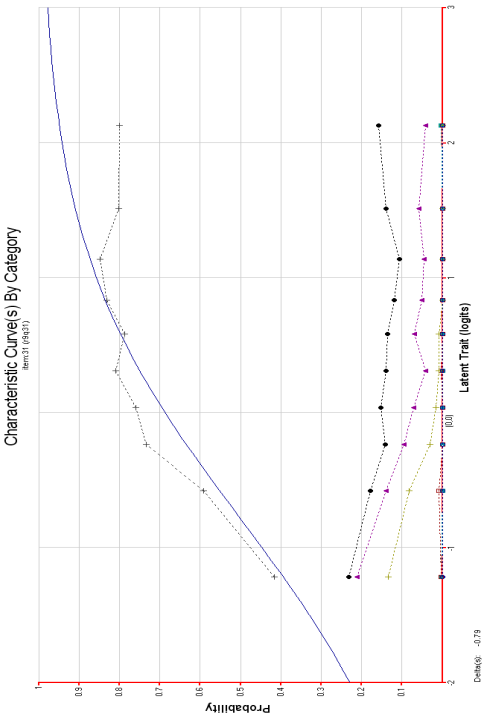
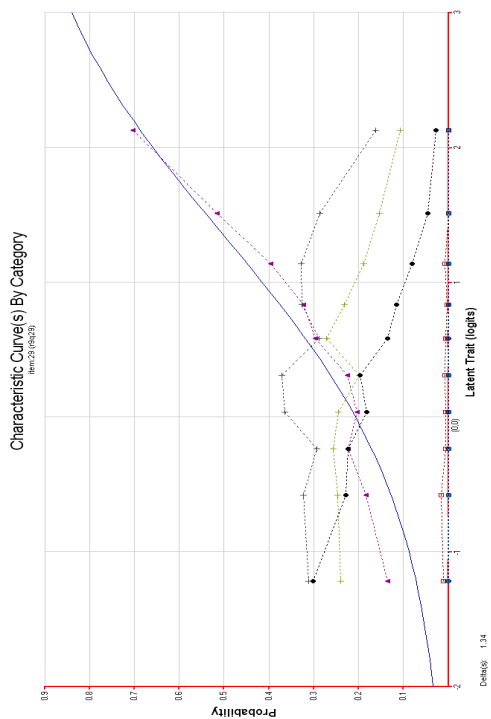
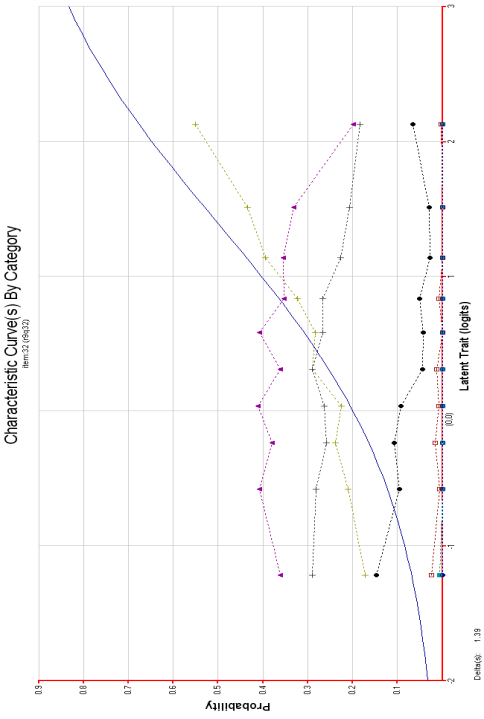
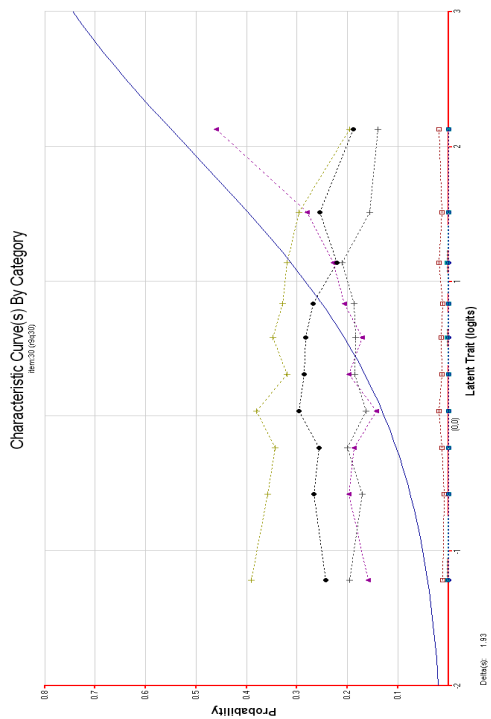


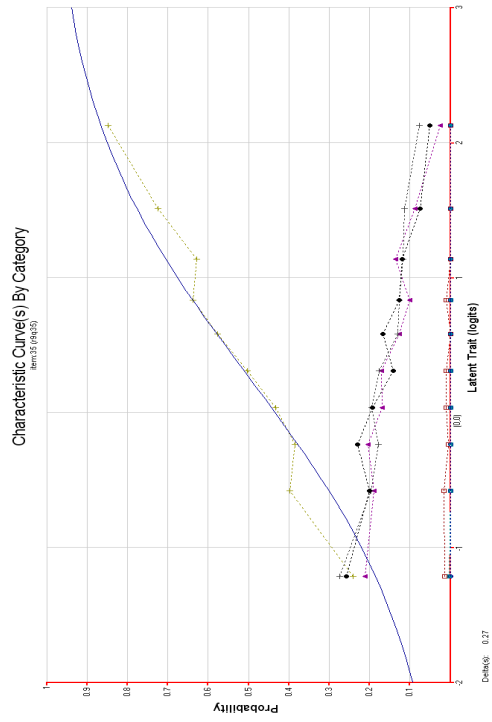
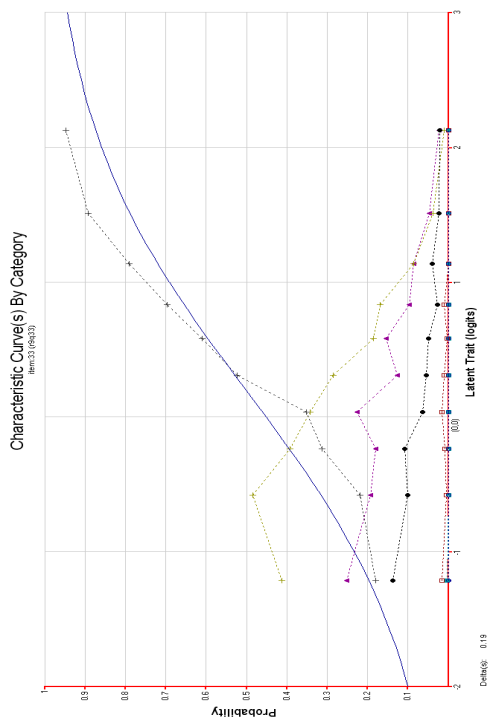
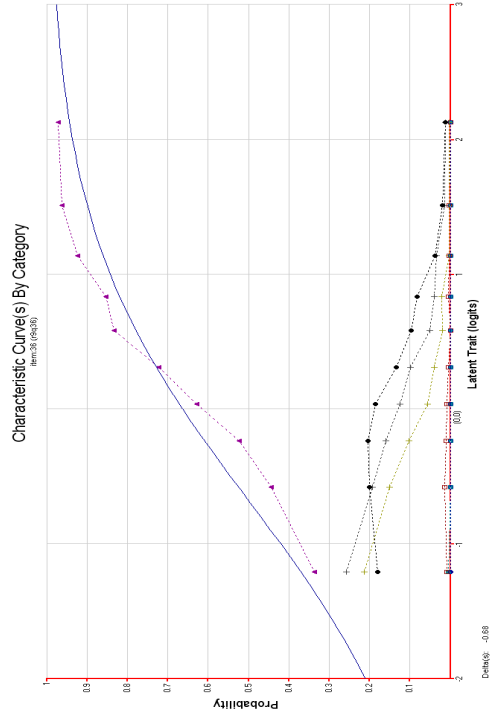
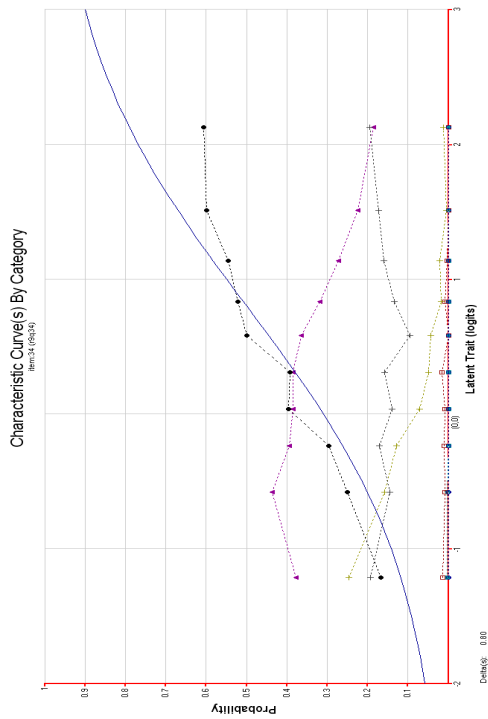


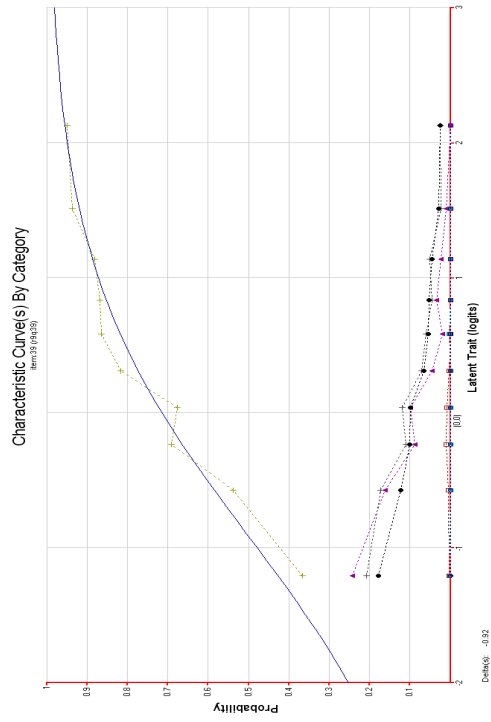
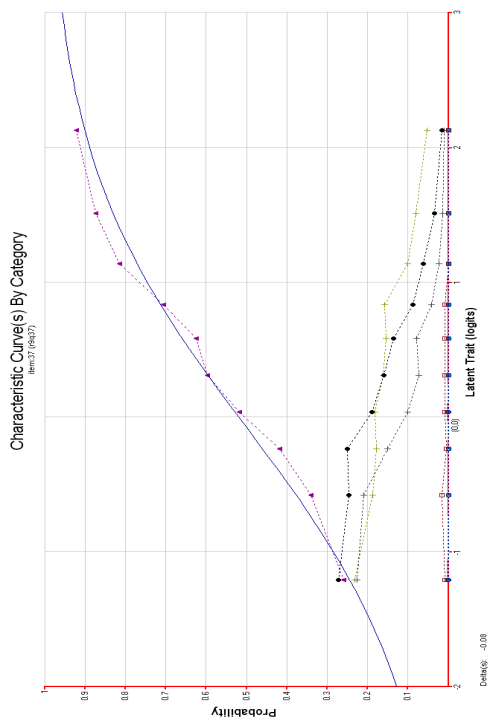
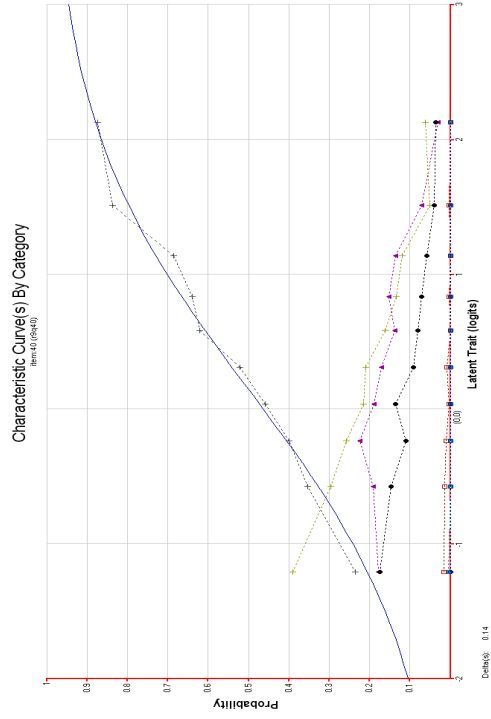
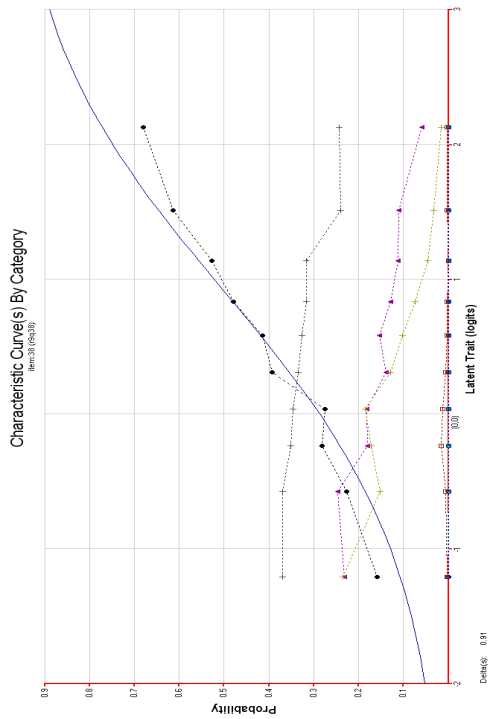


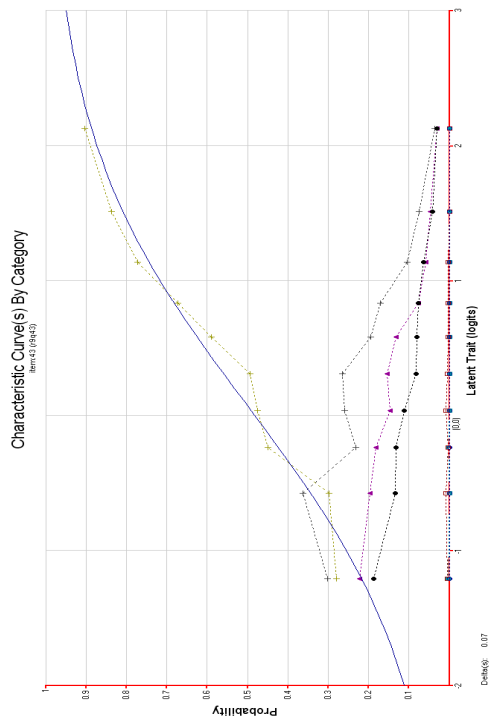
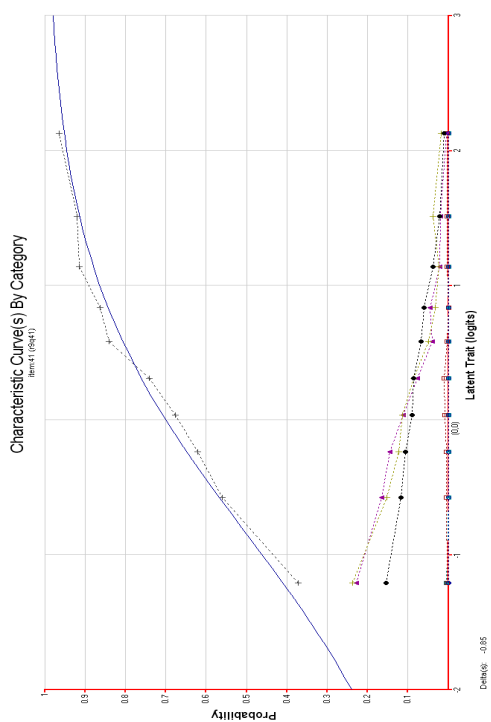
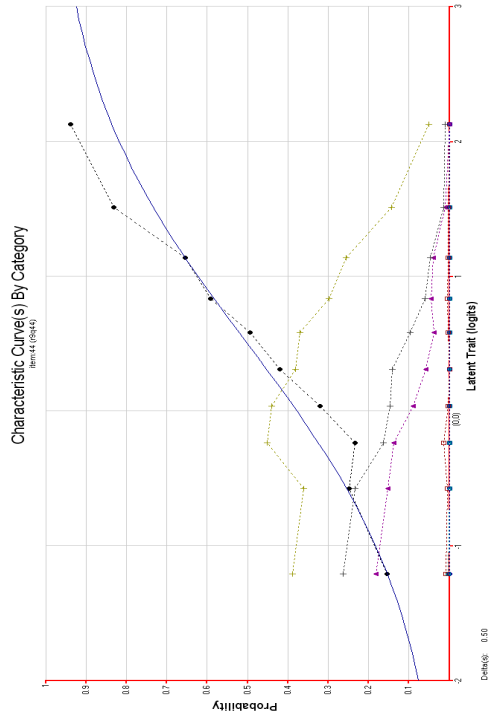
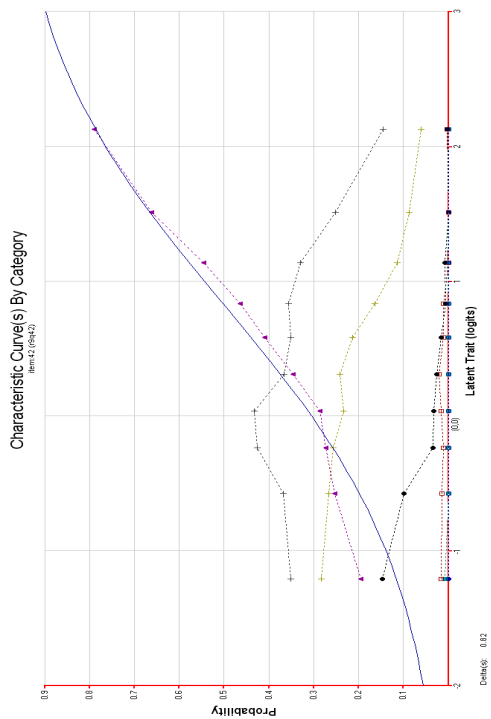


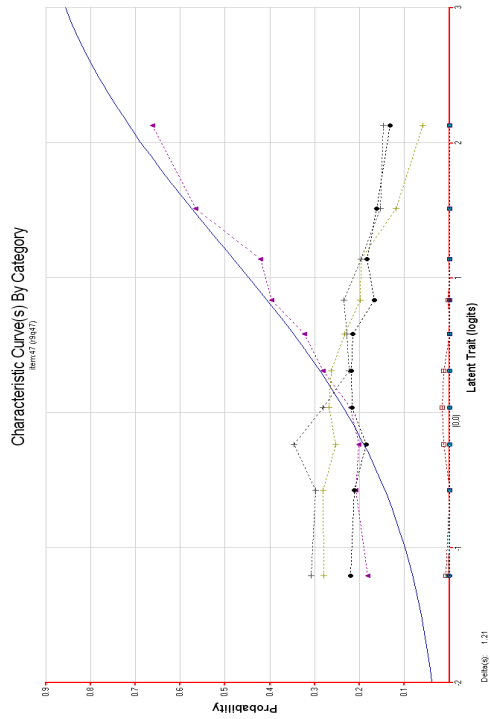
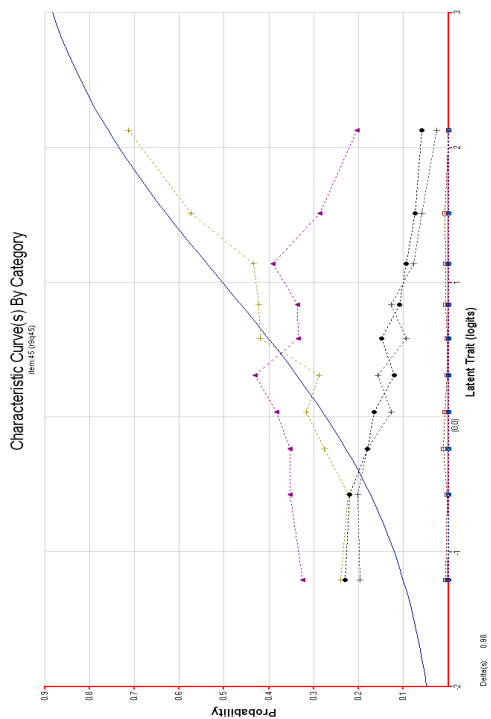
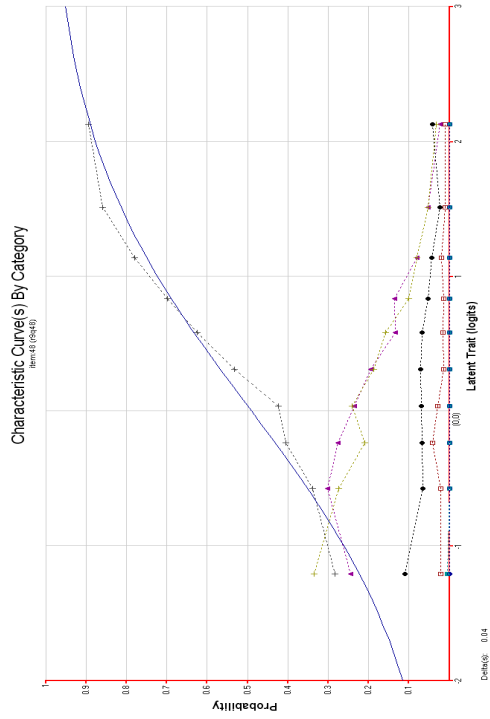
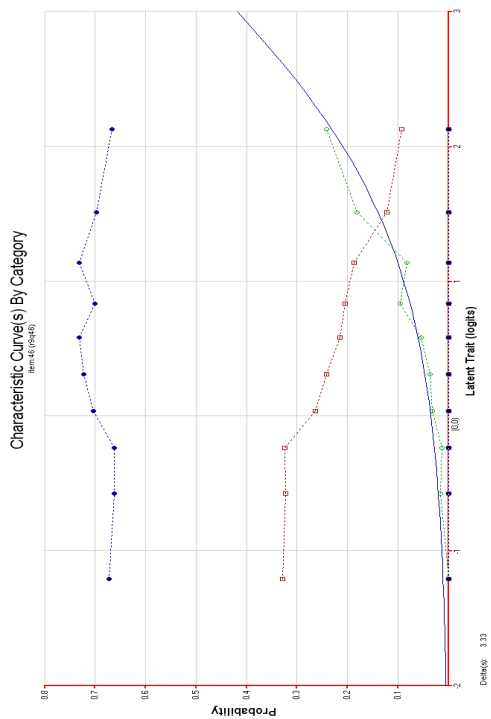


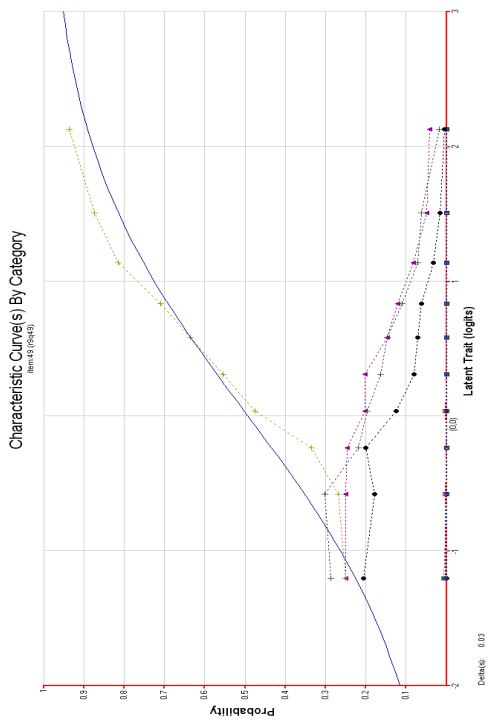




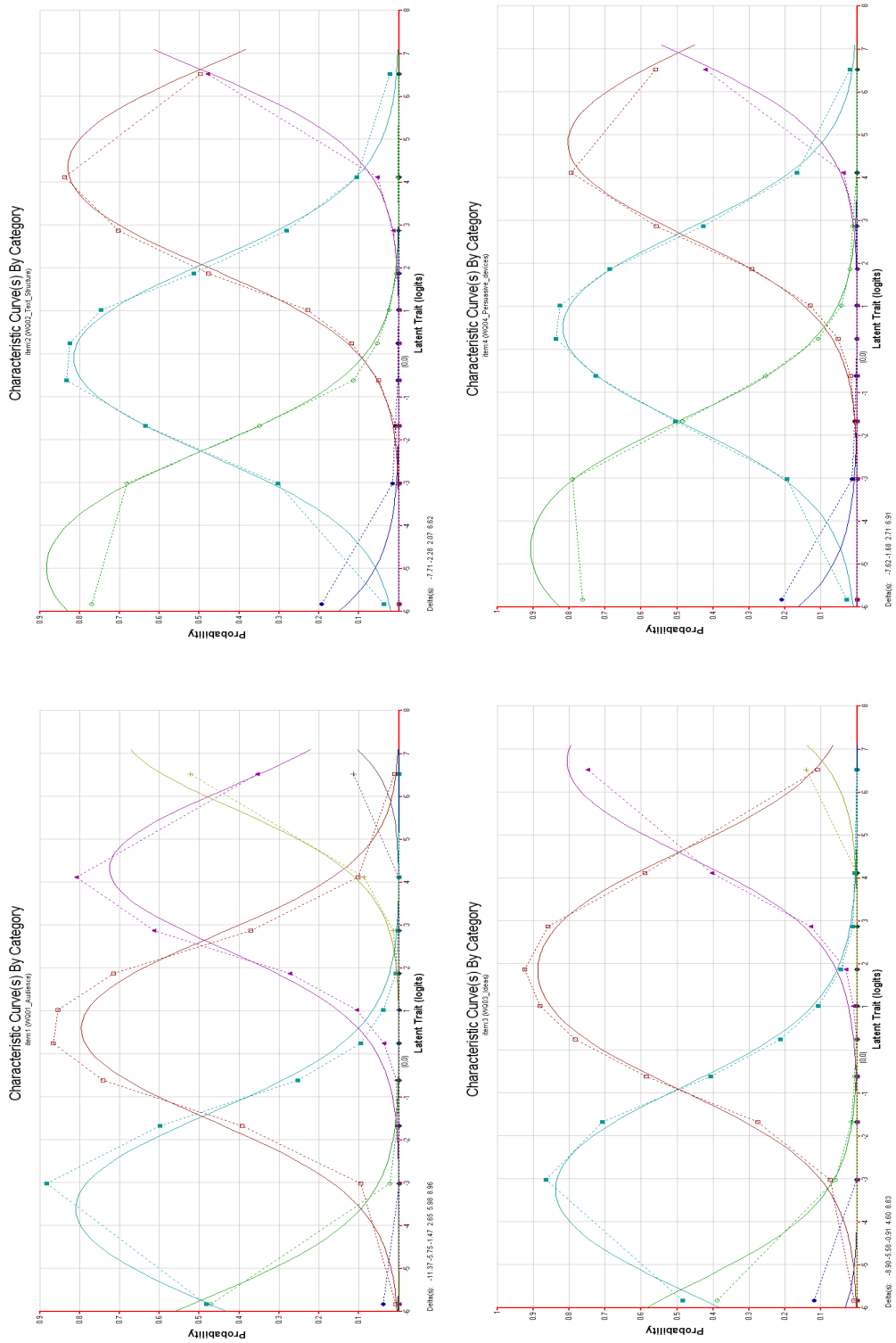


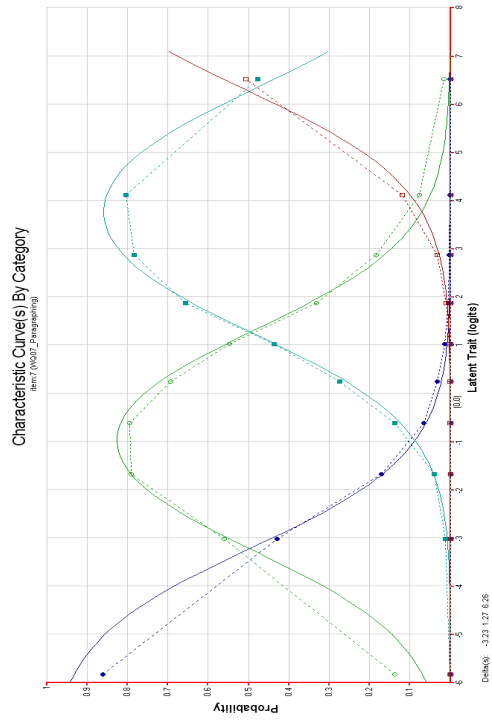
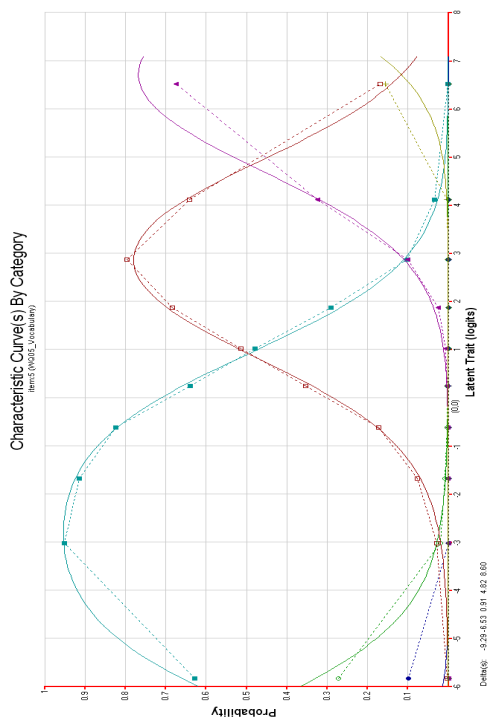
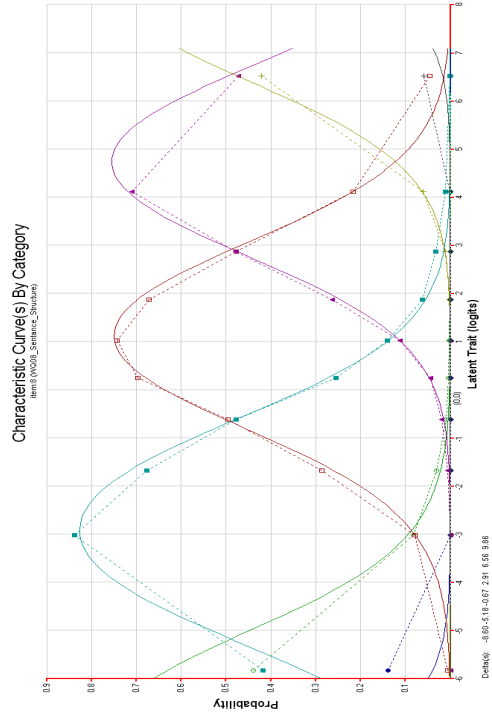
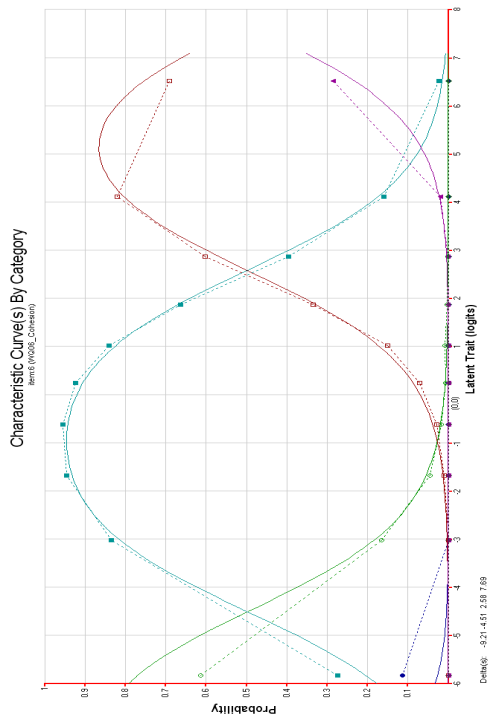


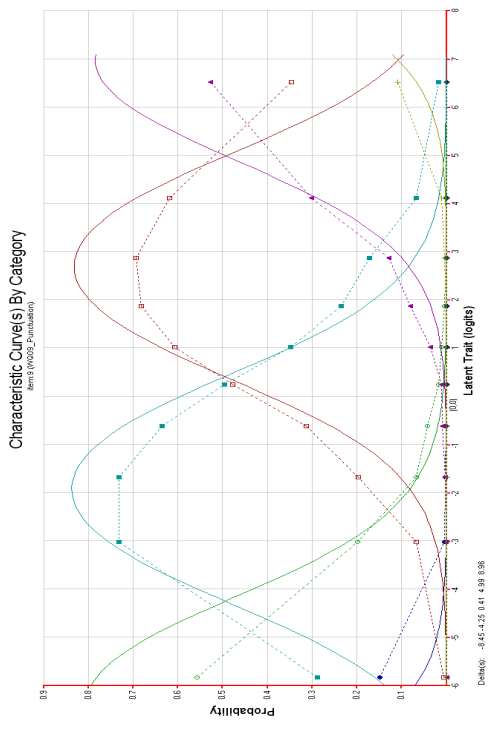
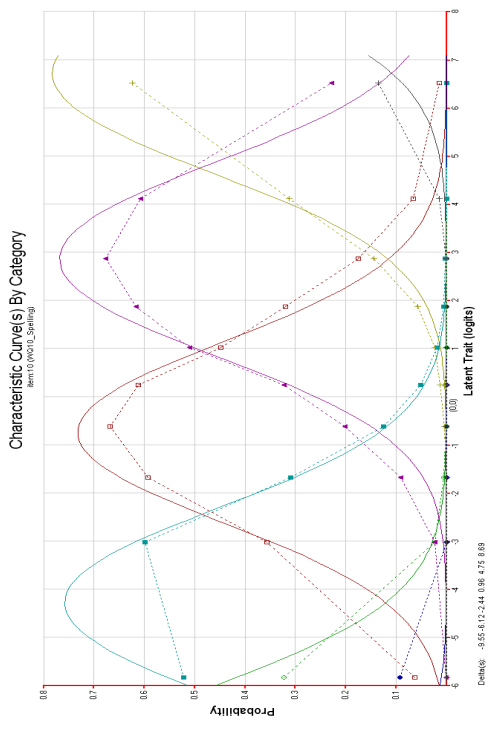




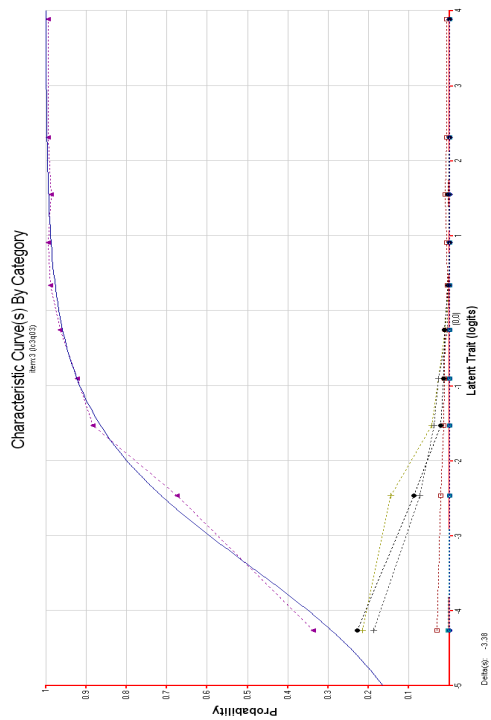
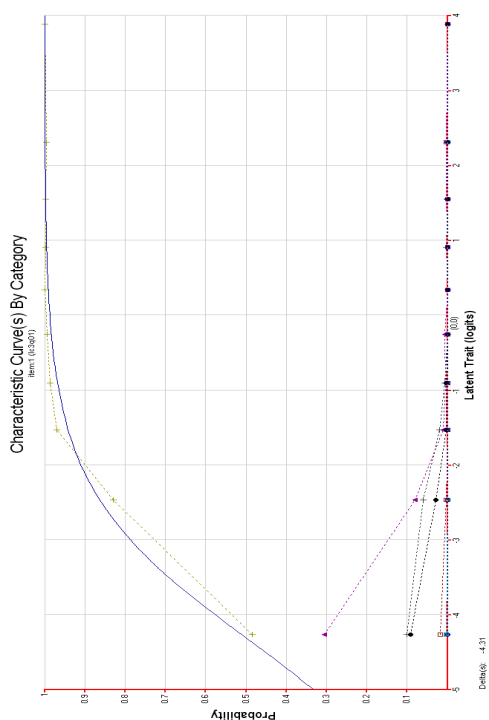
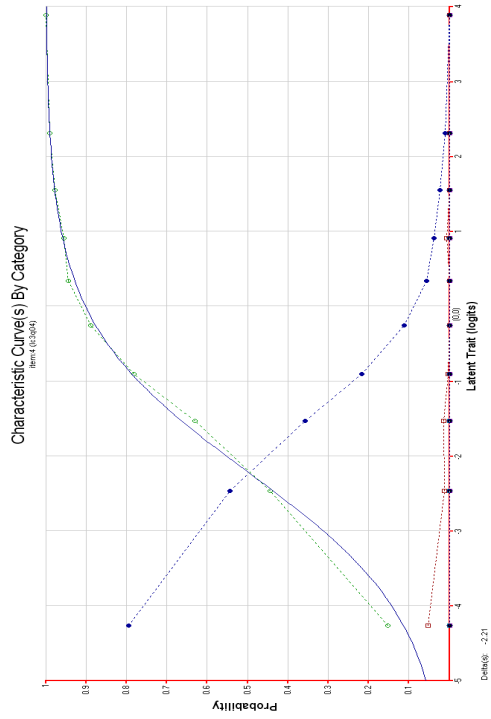
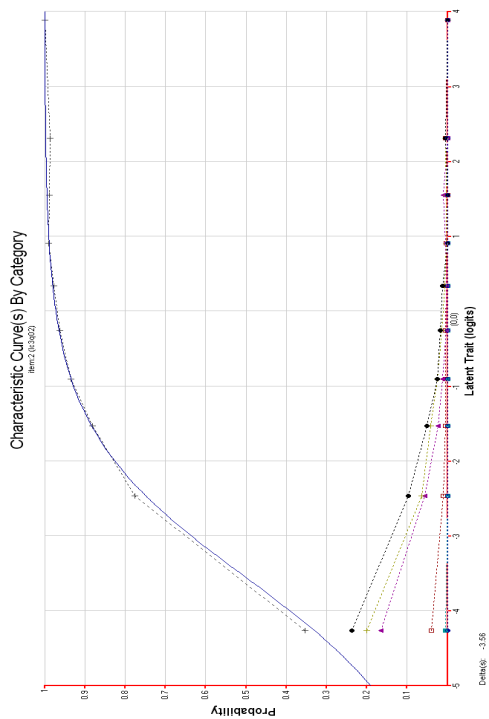
Year 3, 5, 7 and 9 Writing

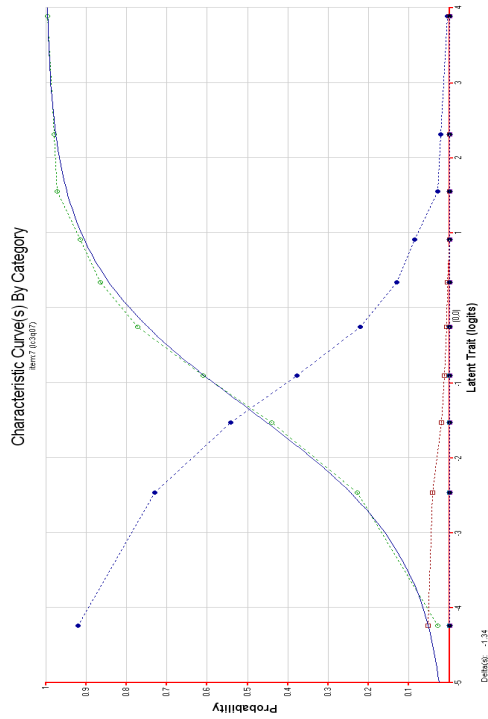
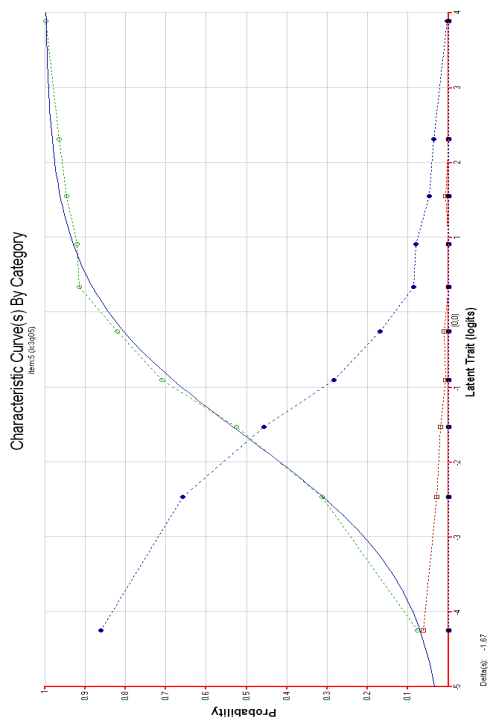
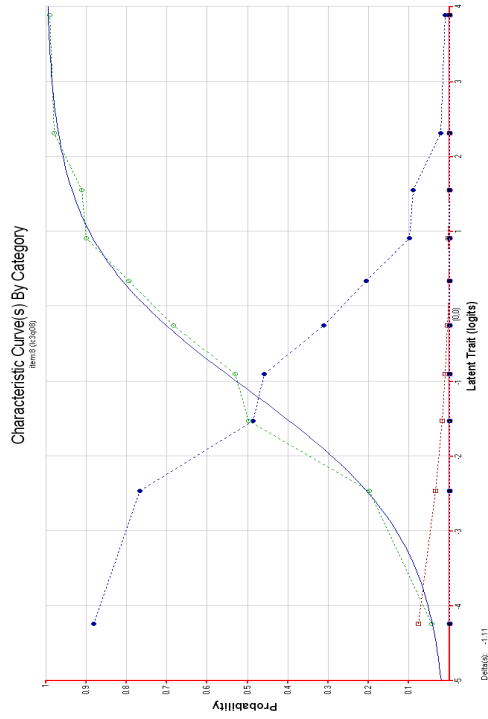
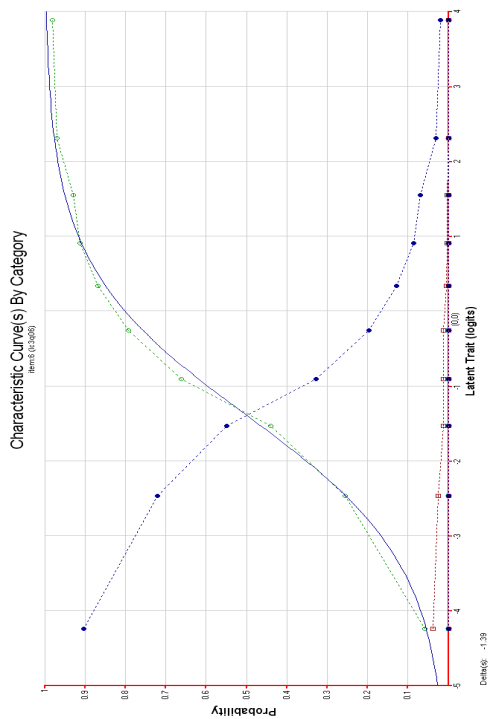


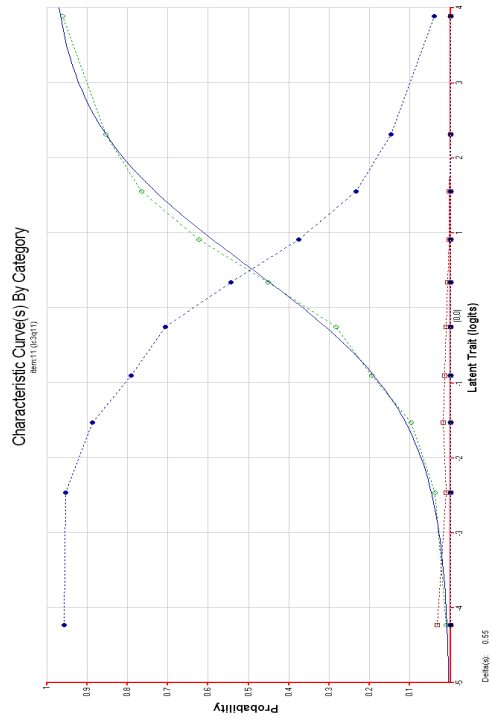
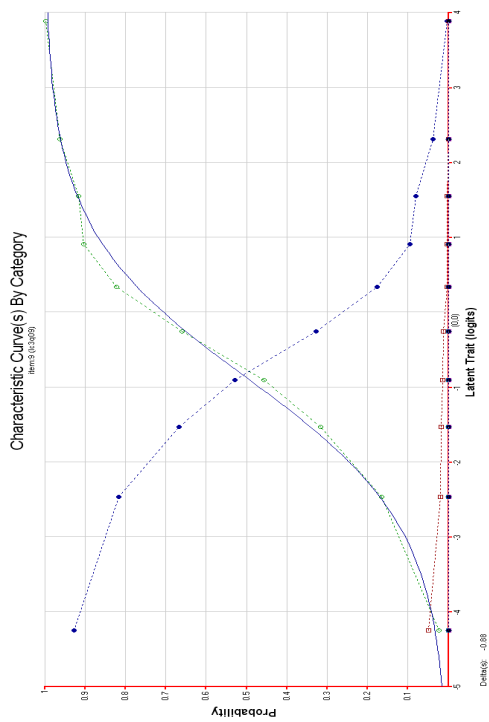
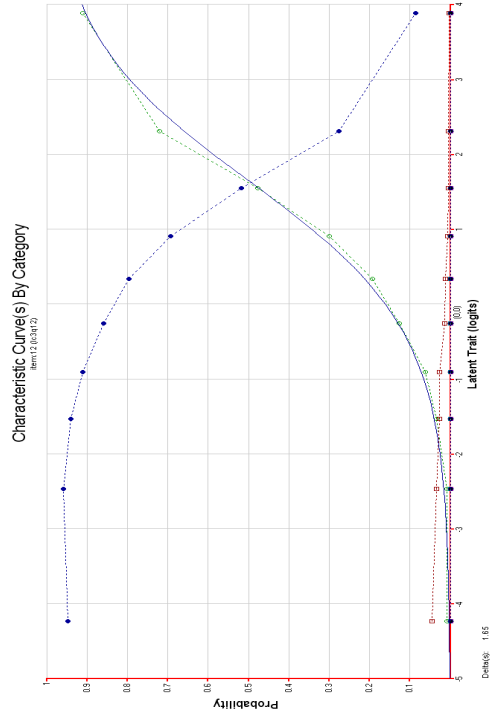
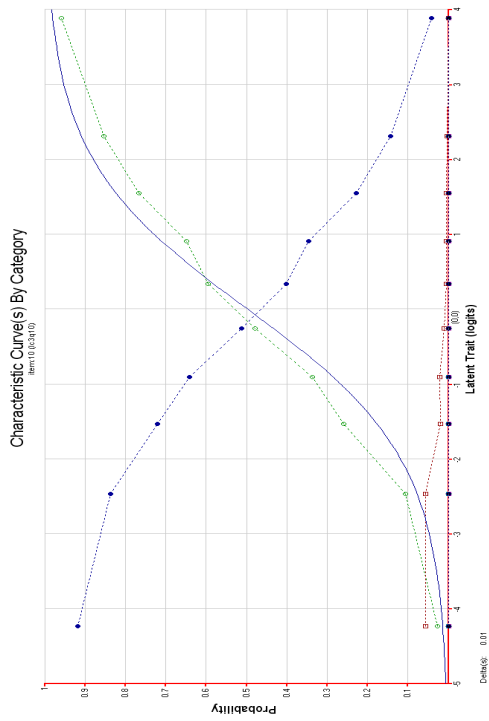


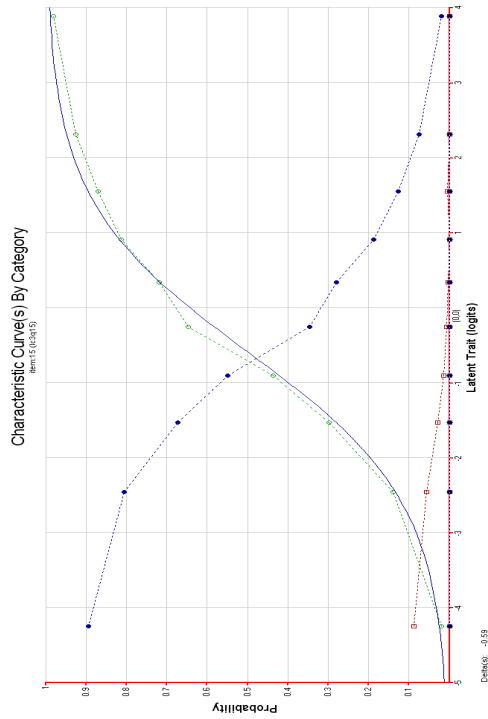
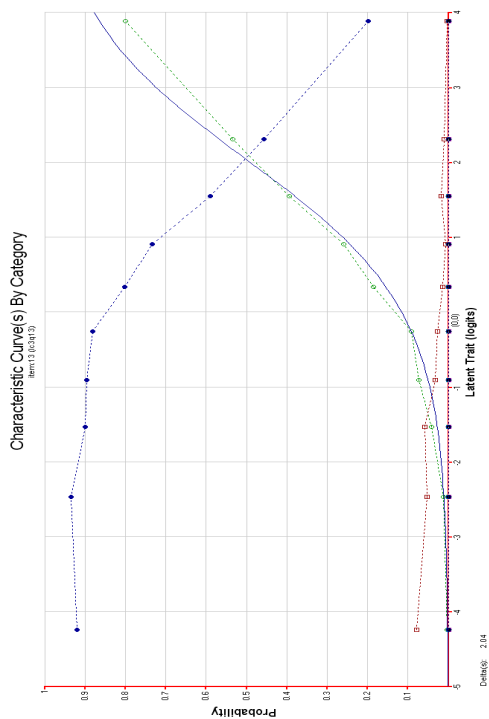
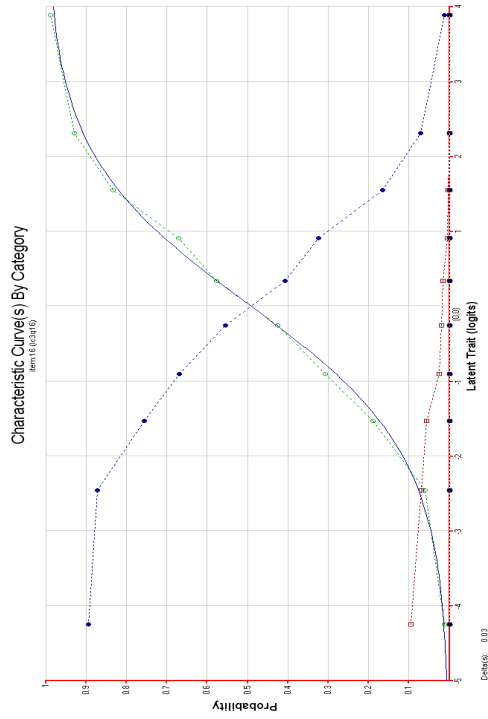
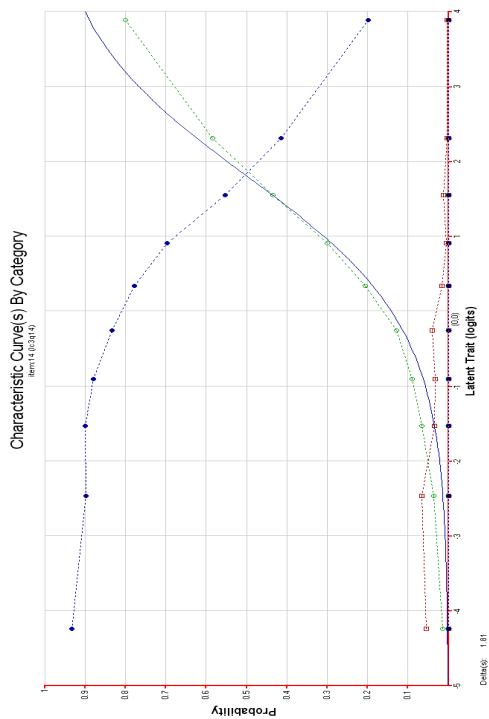


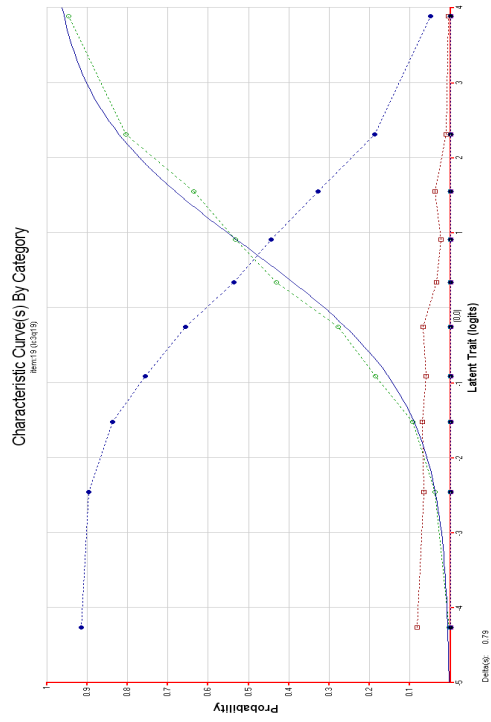
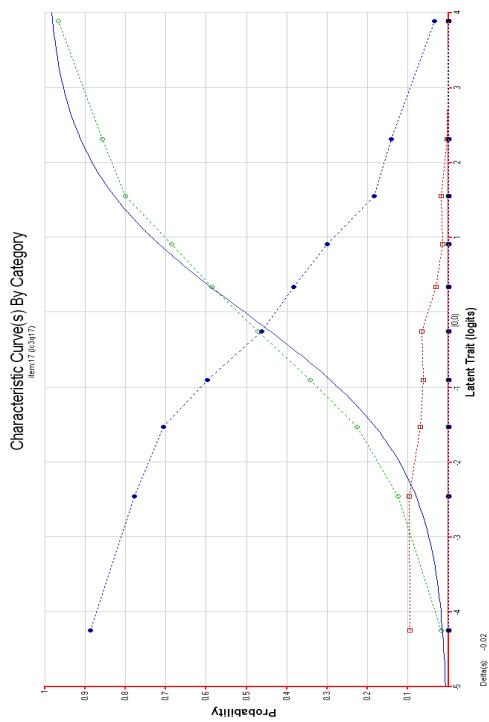
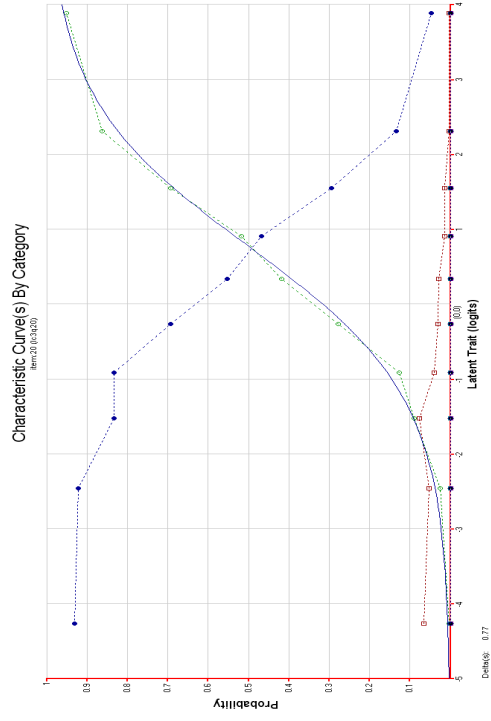
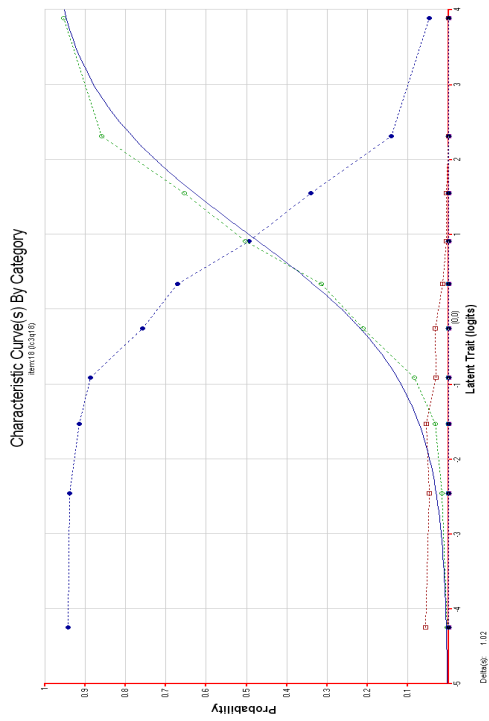
Year 3 Spelling

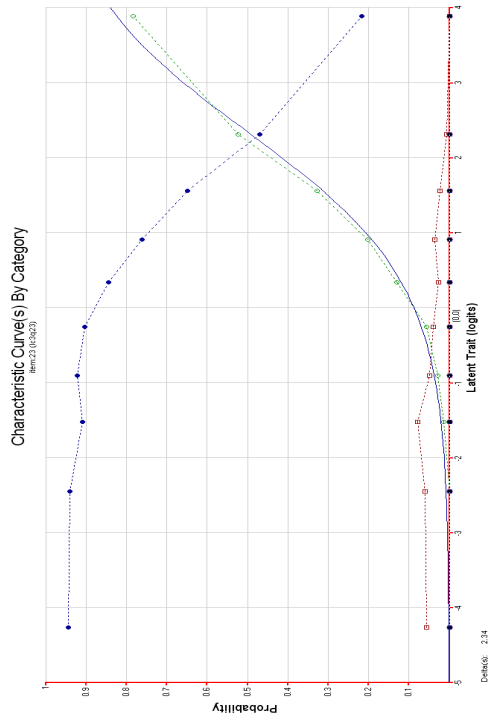
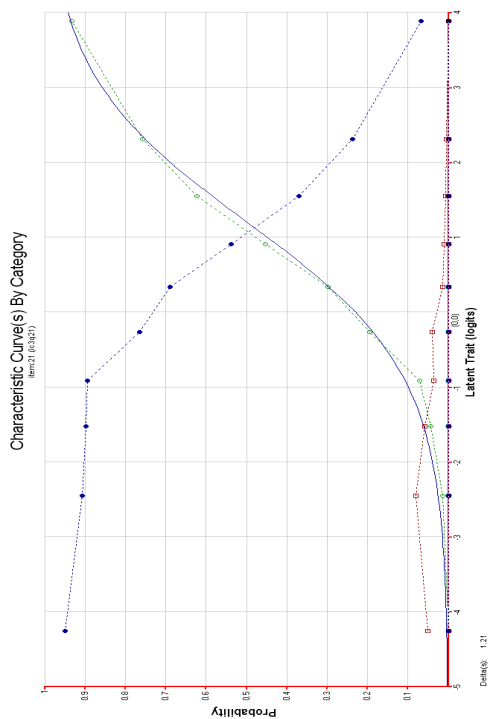
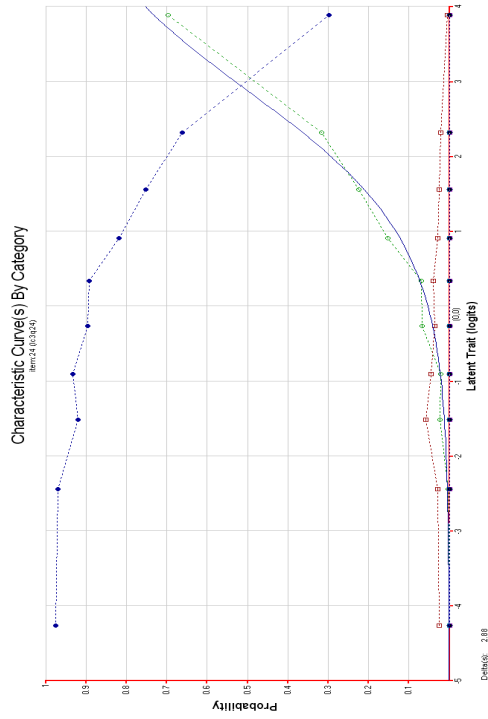
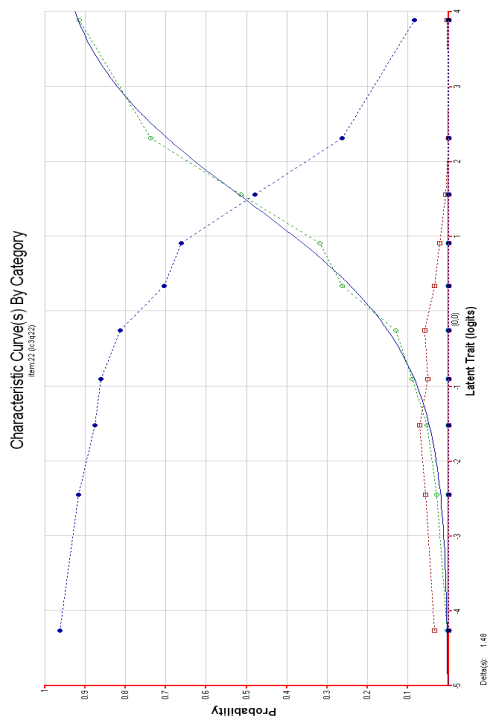


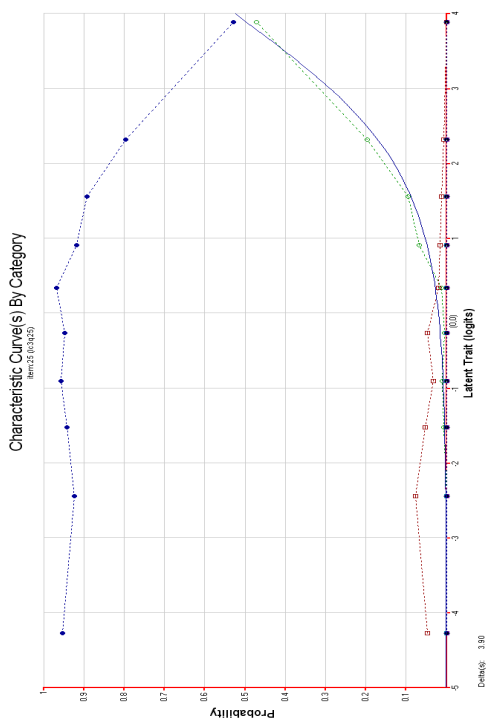




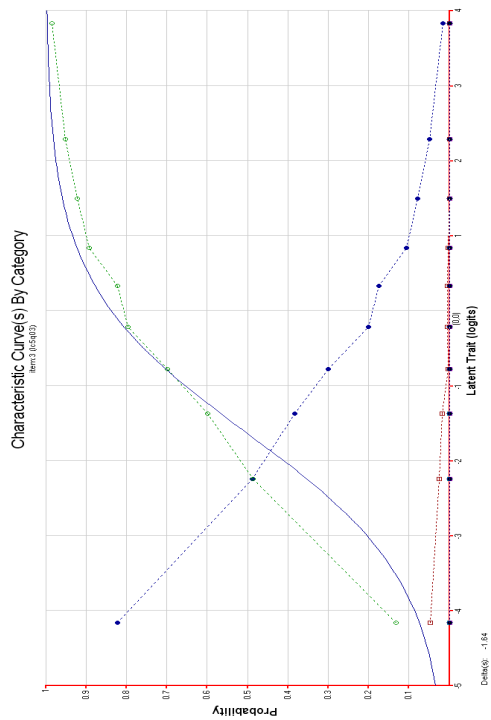
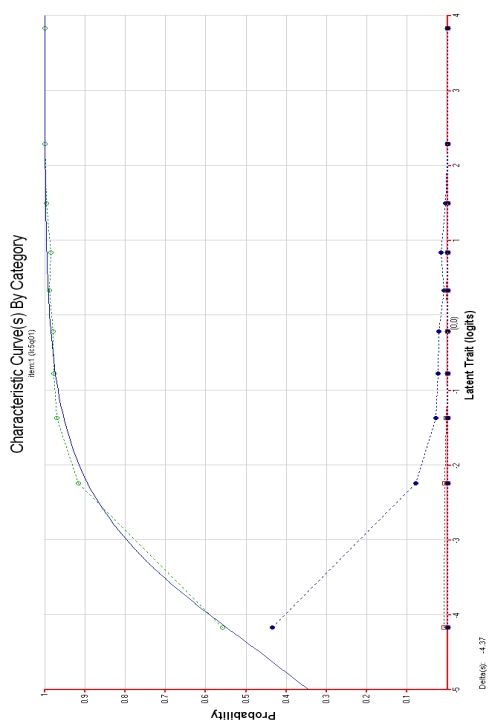
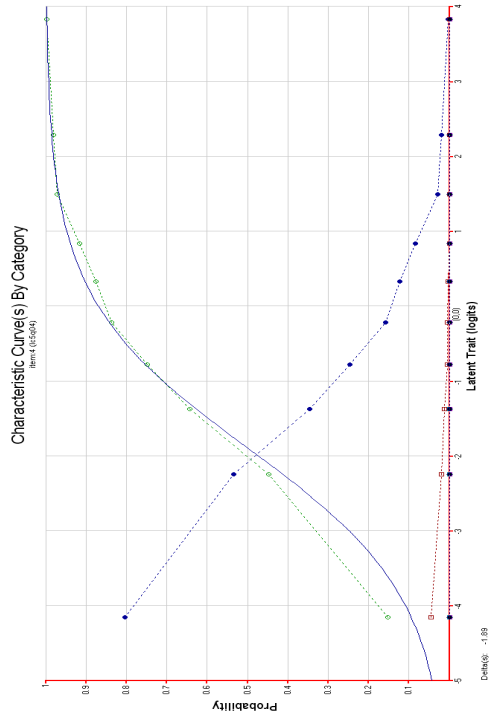
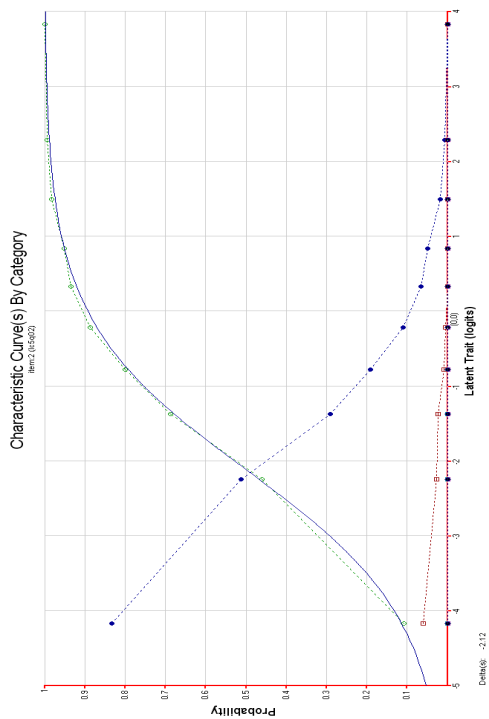


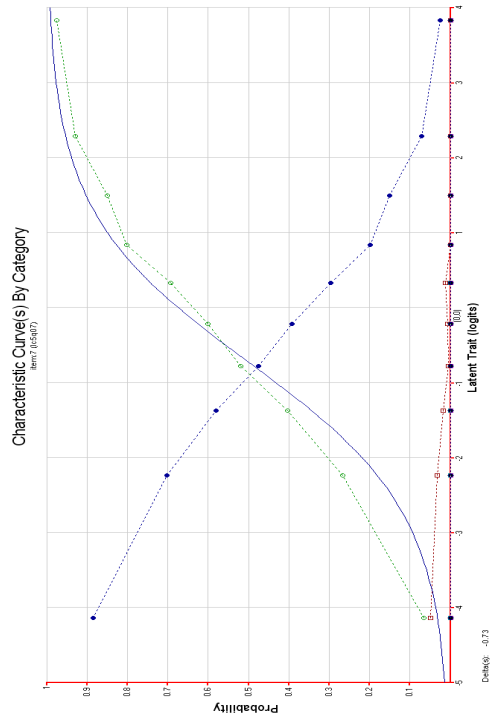
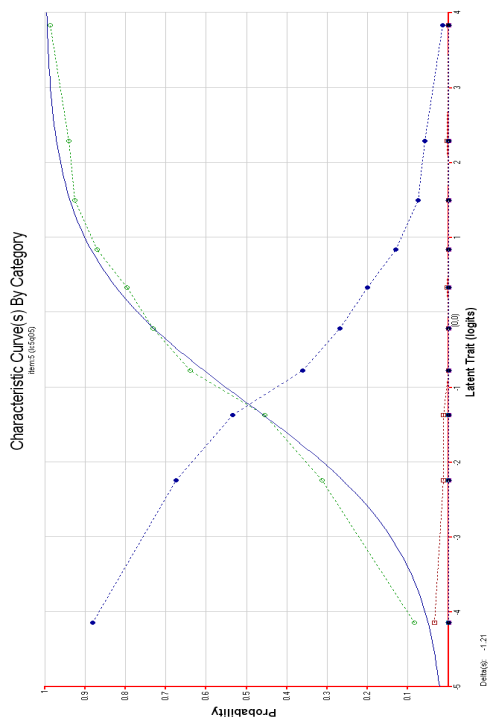
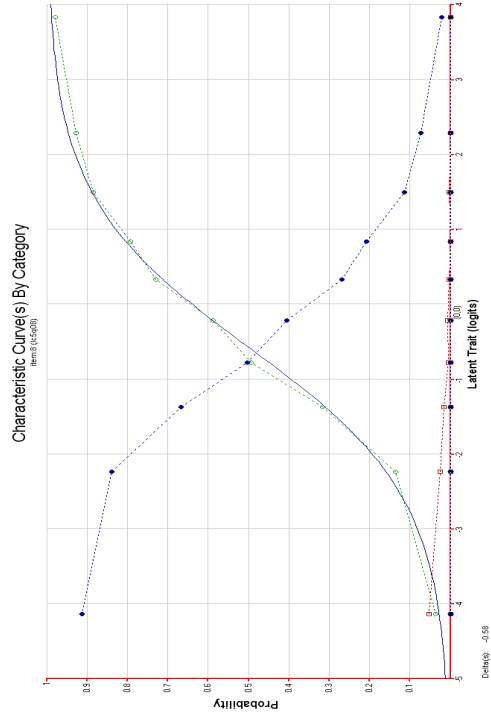
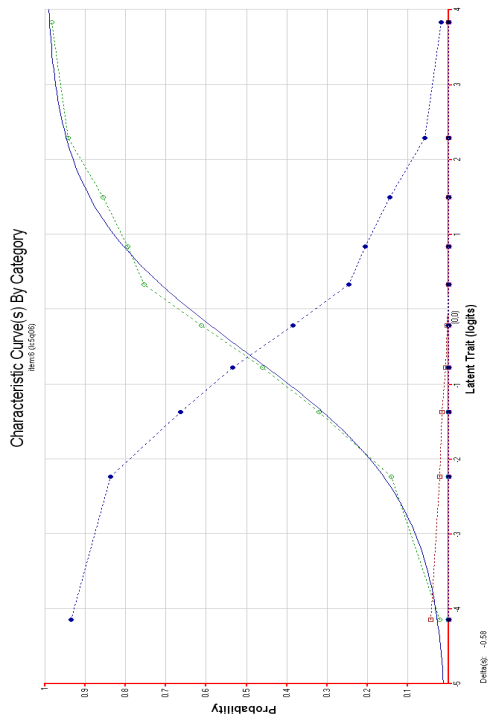


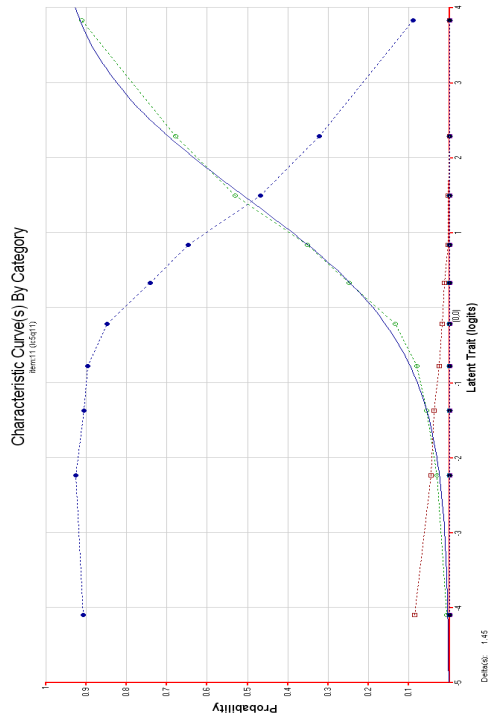
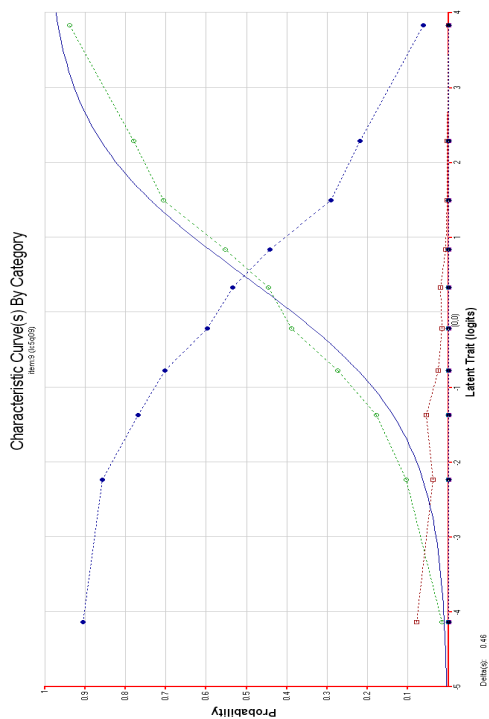
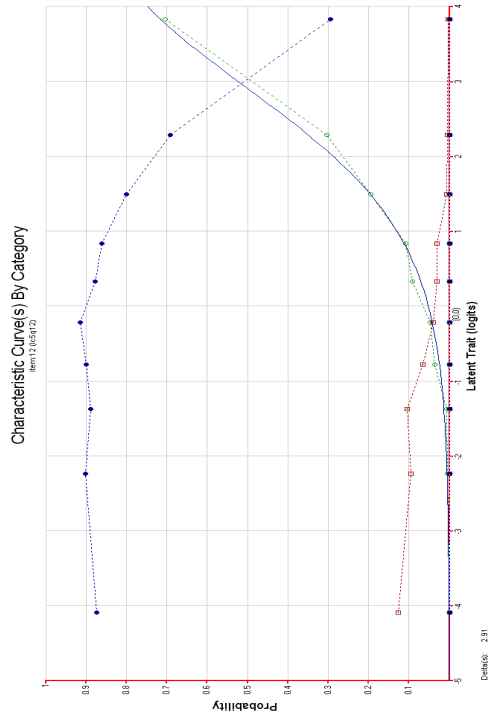
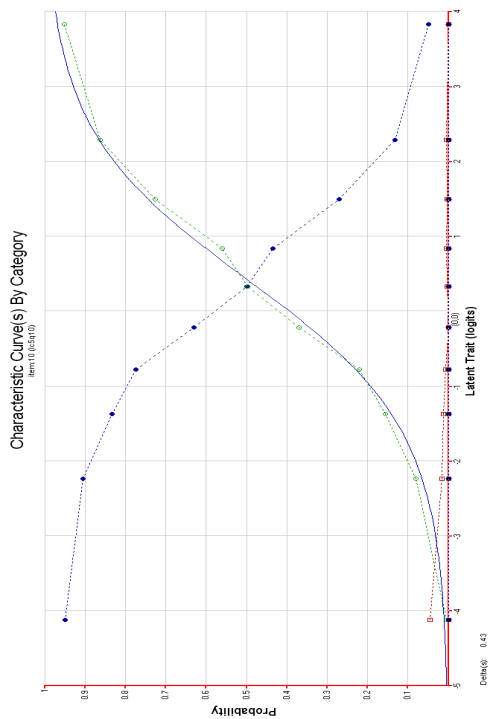


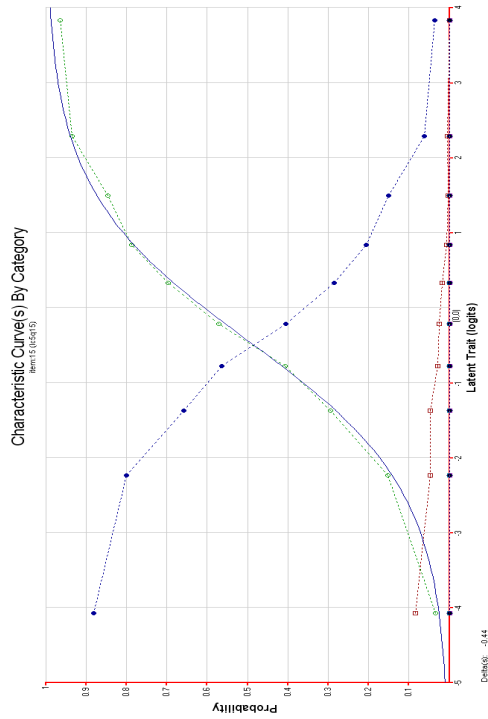
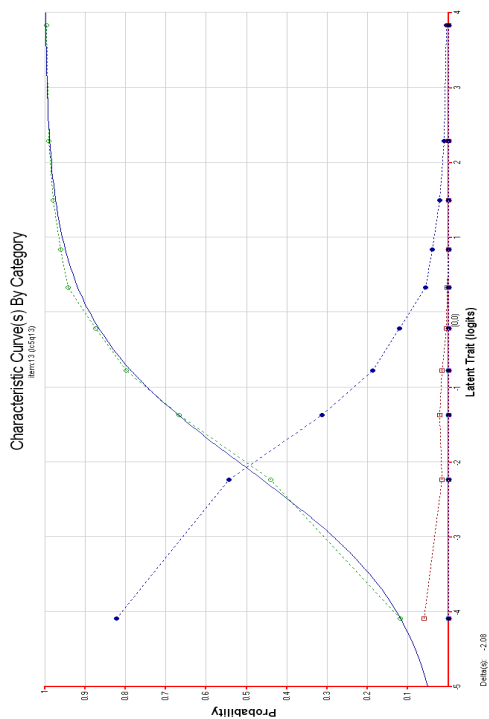
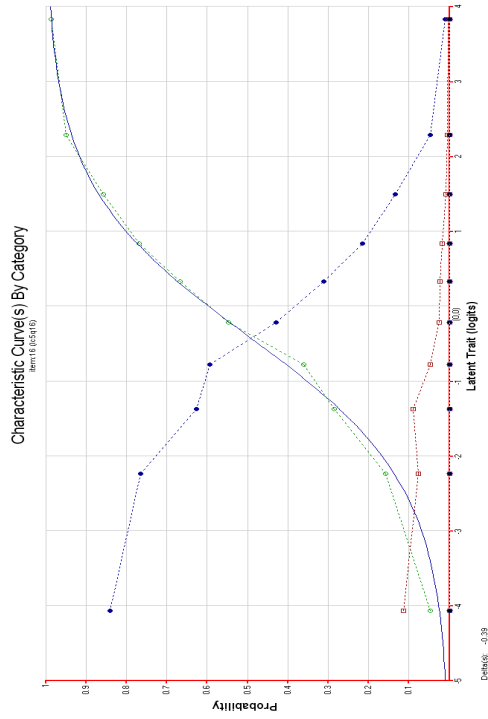
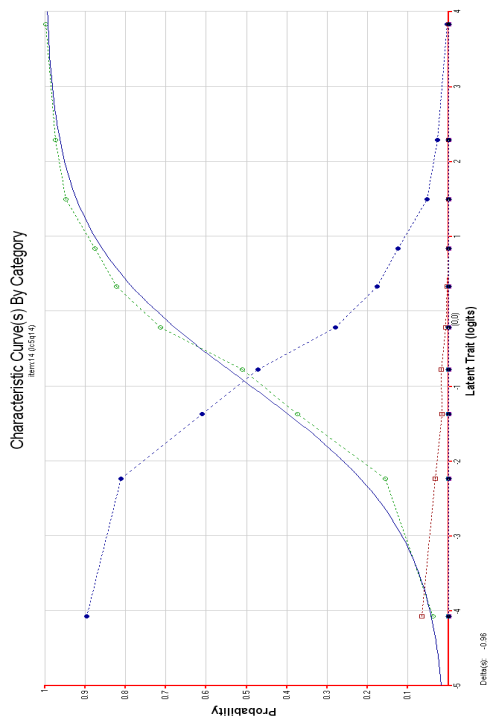


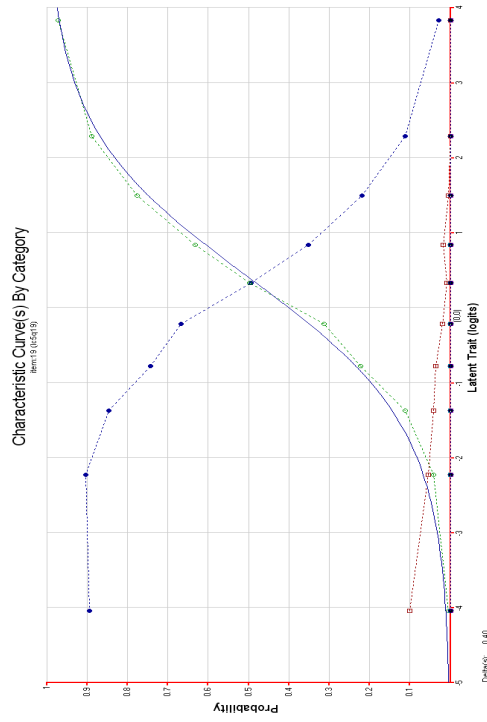
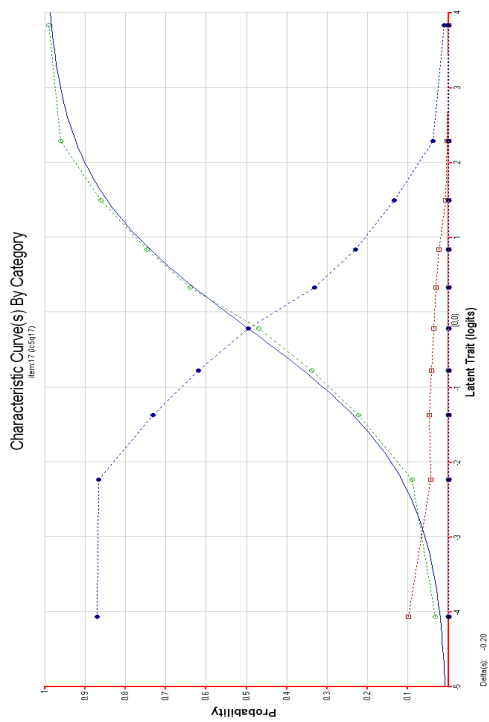
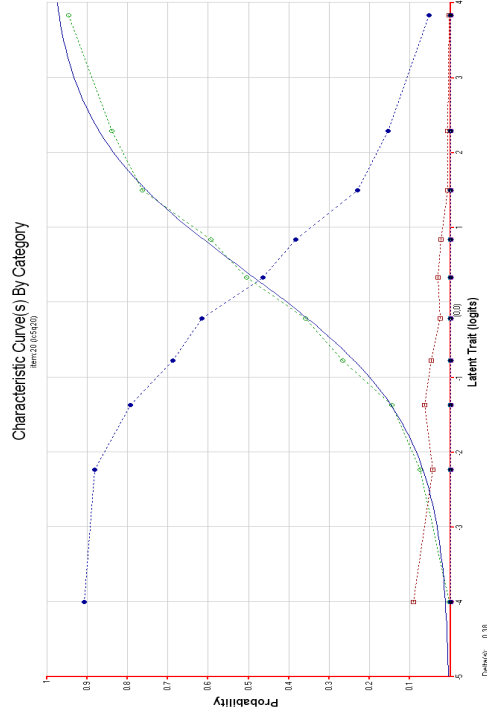
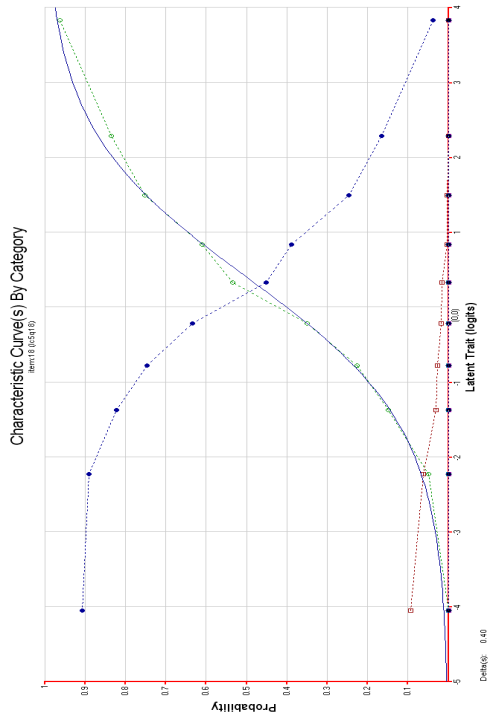
Year 5 Spelling

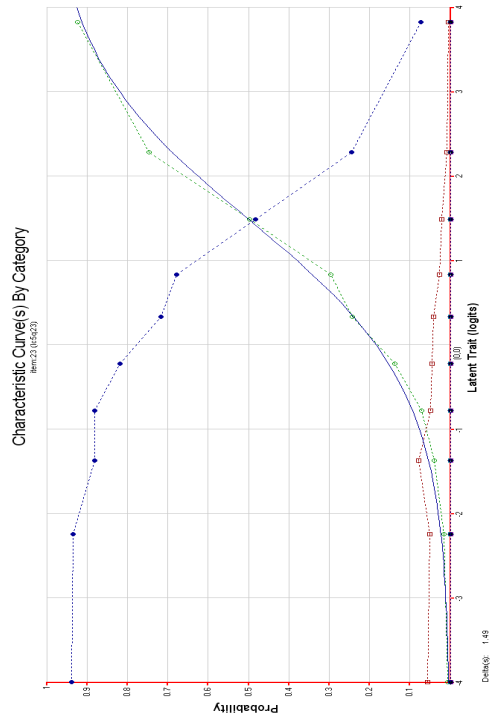
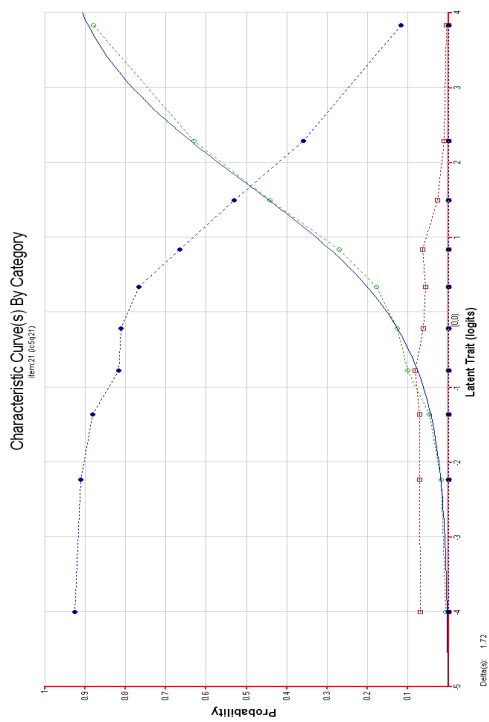
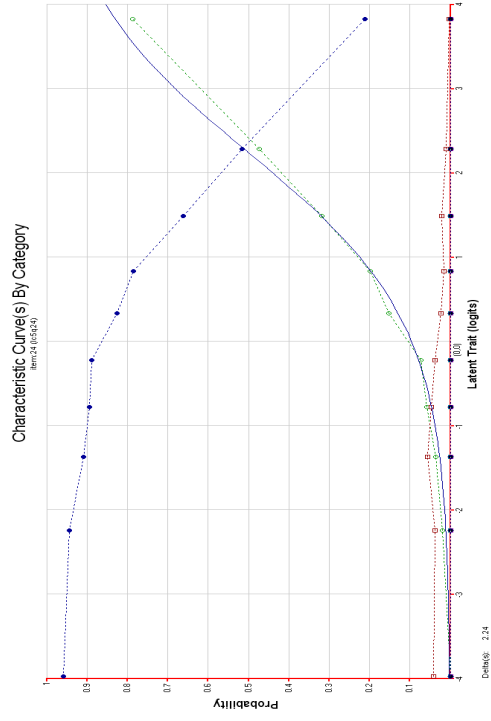
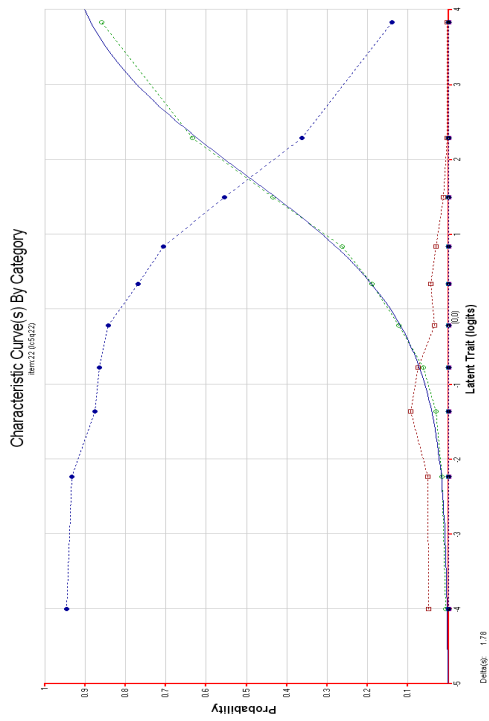


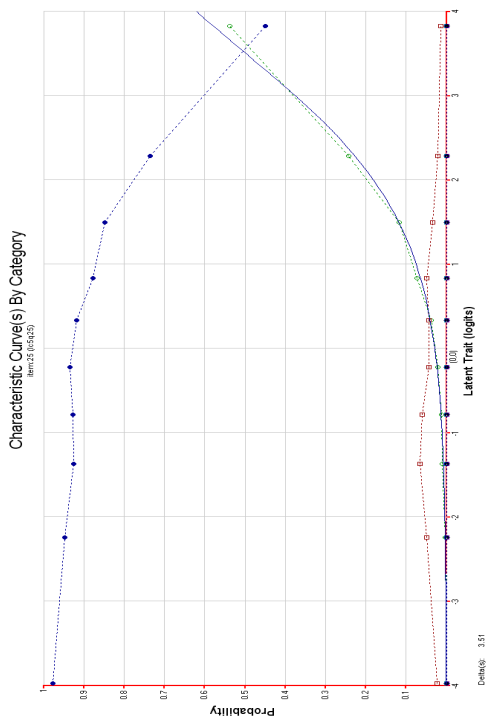




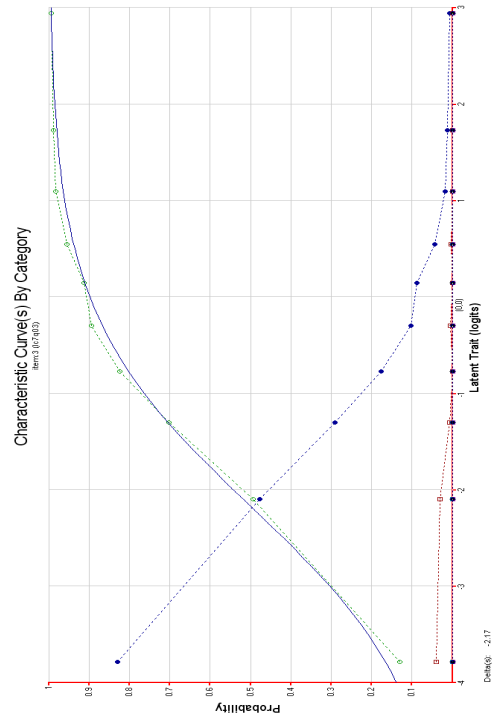
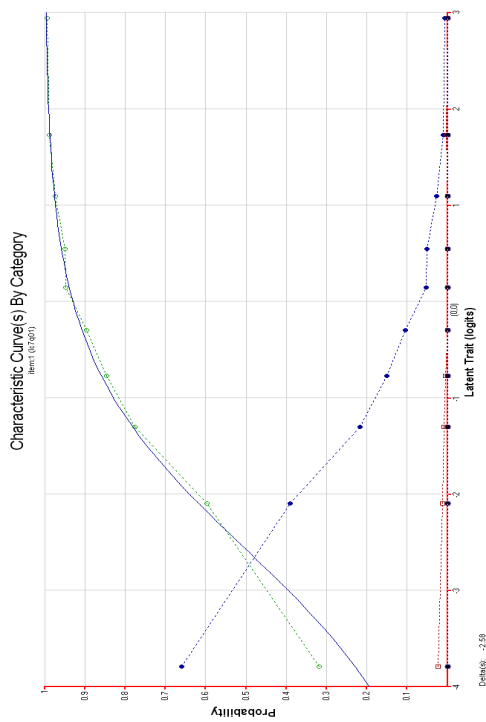
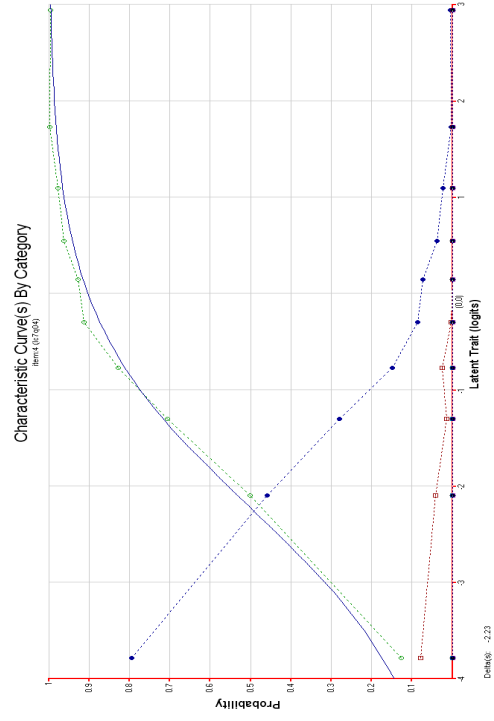
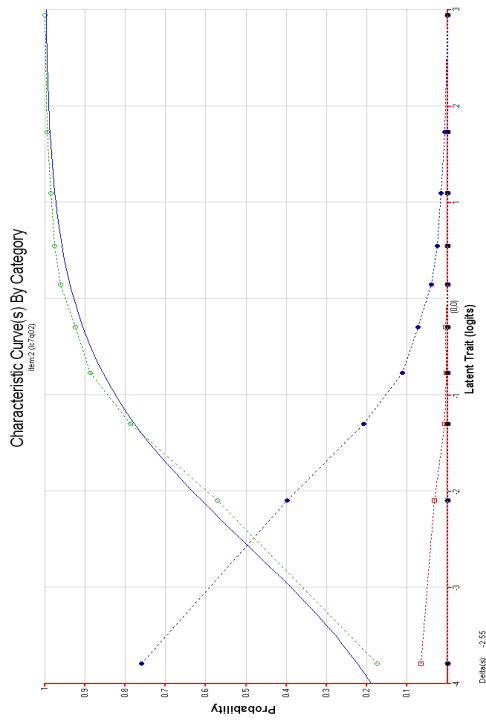


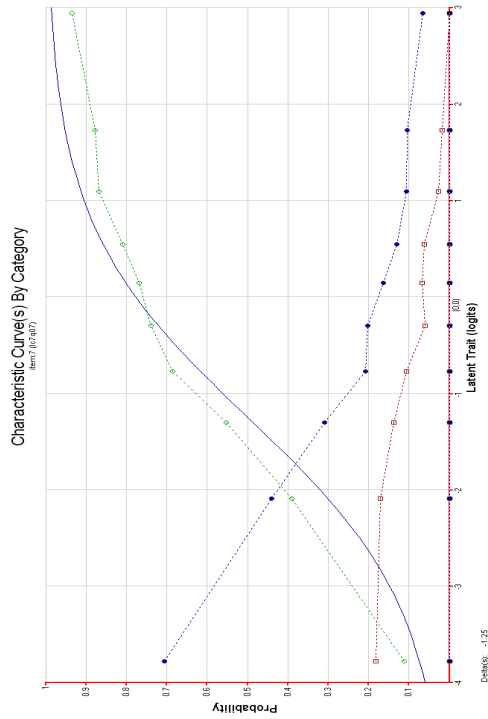
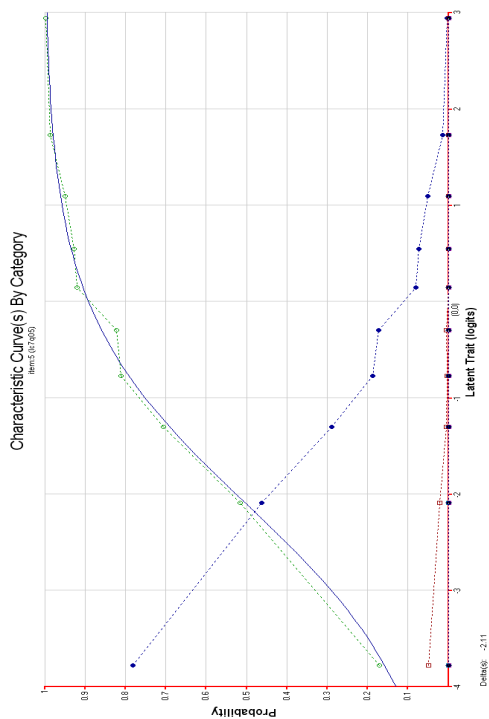
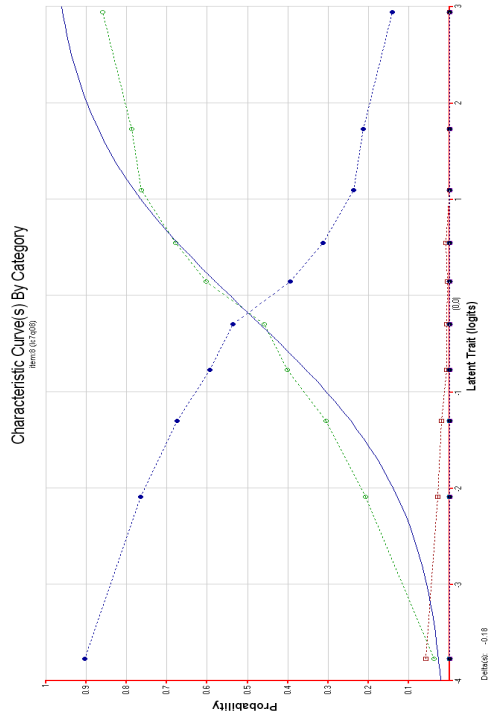
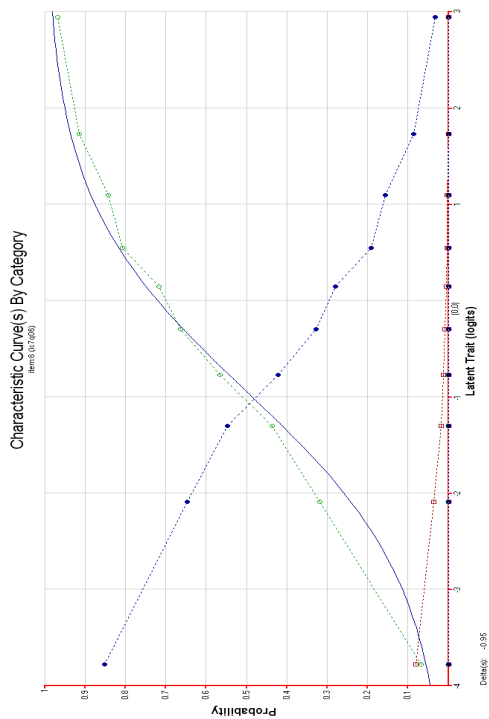


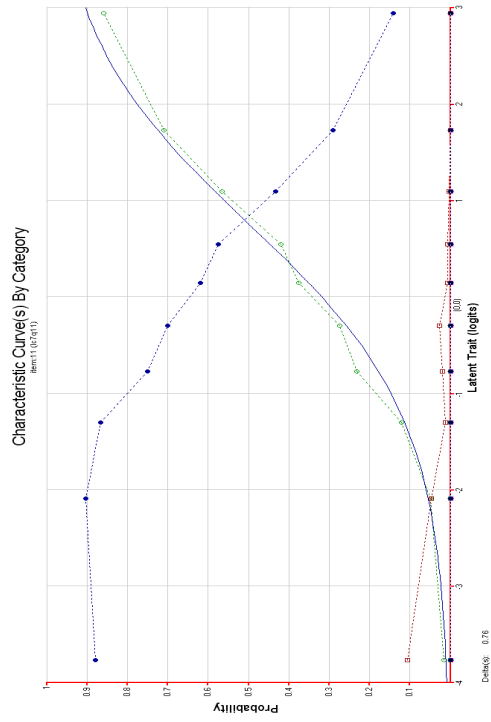
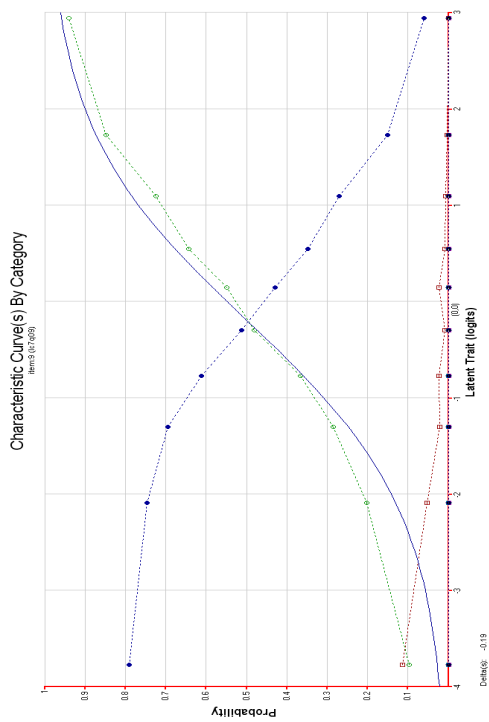
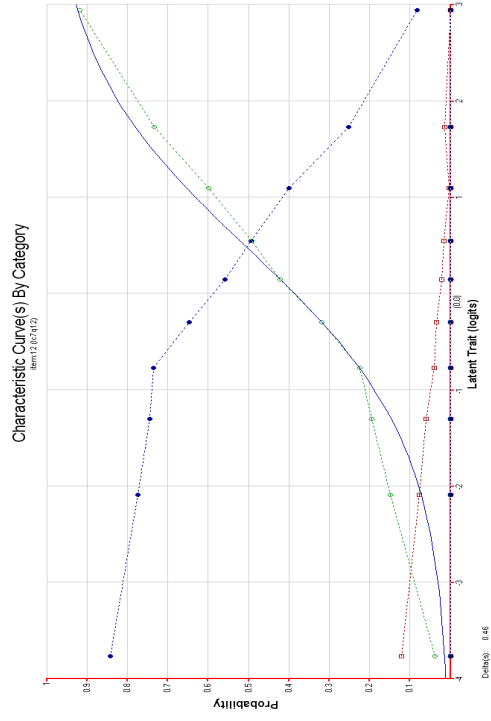
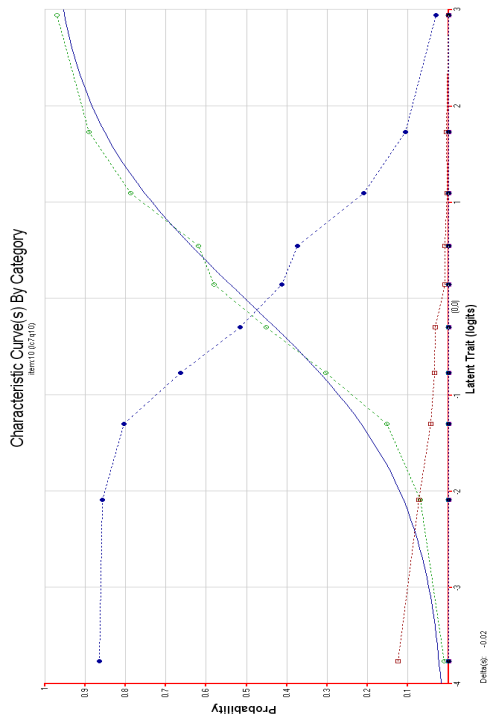


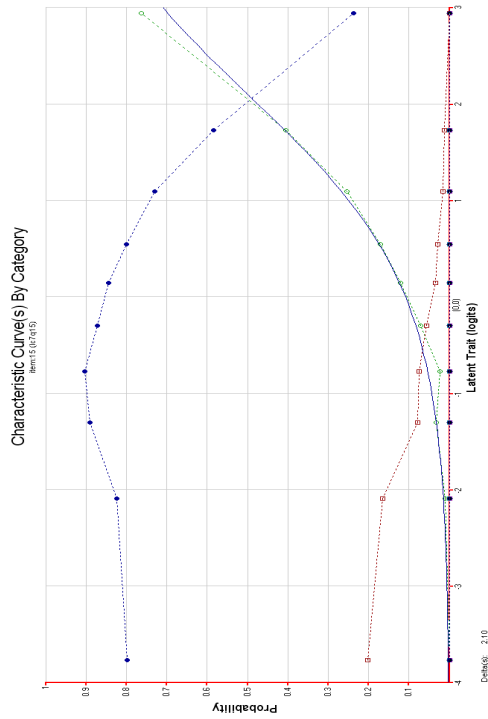
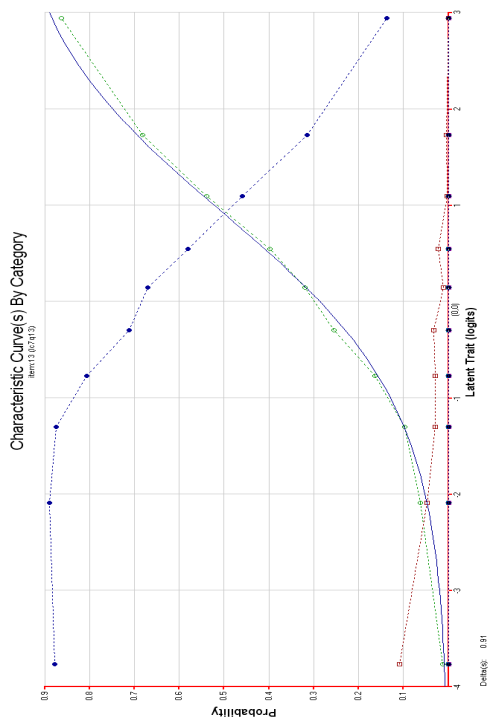
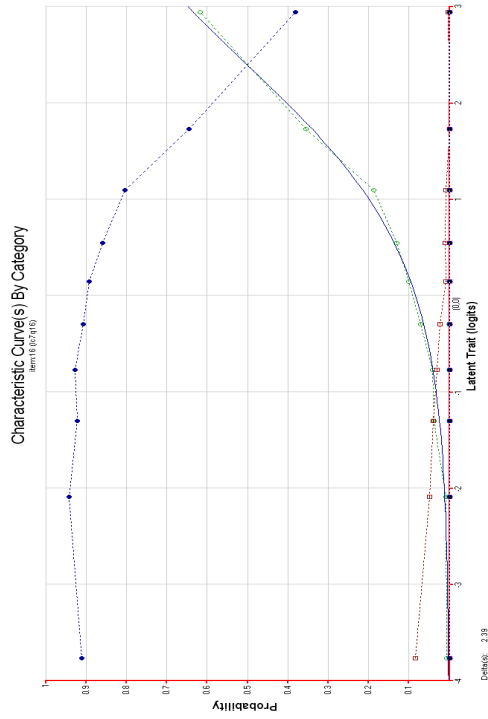
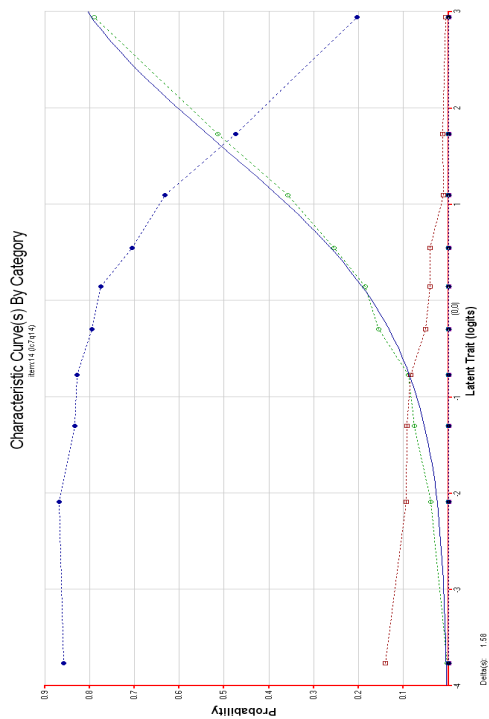


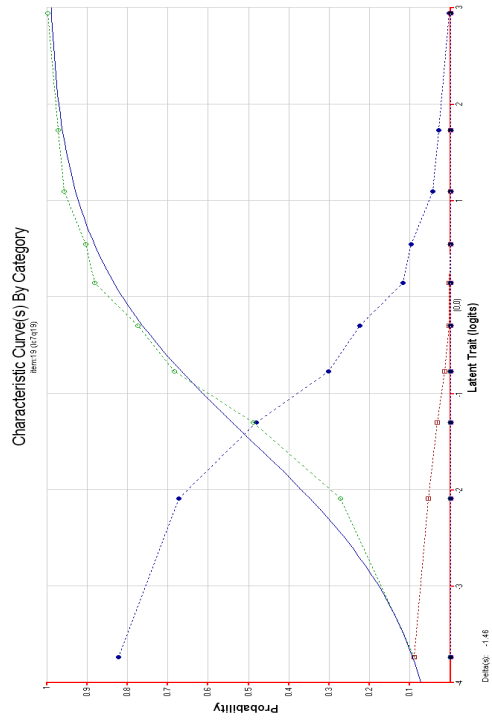
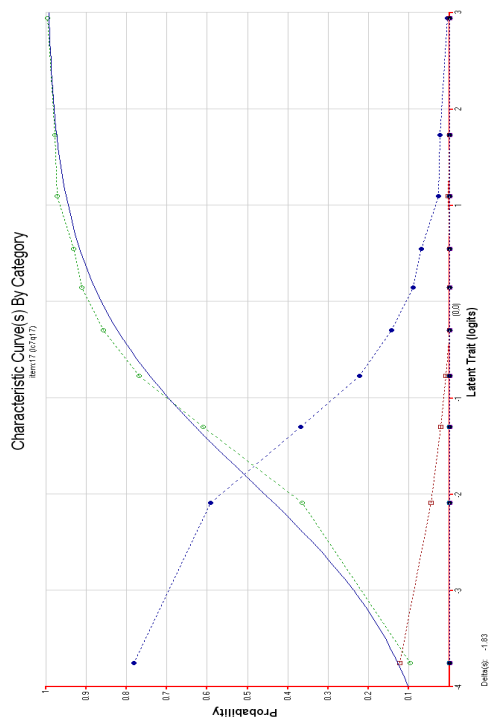
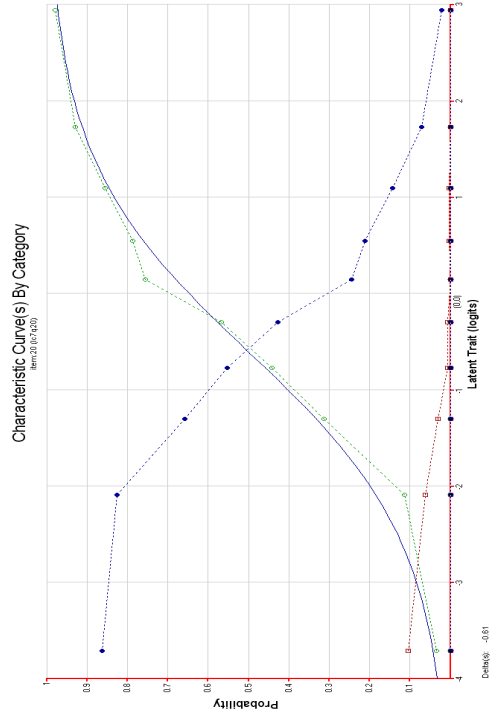
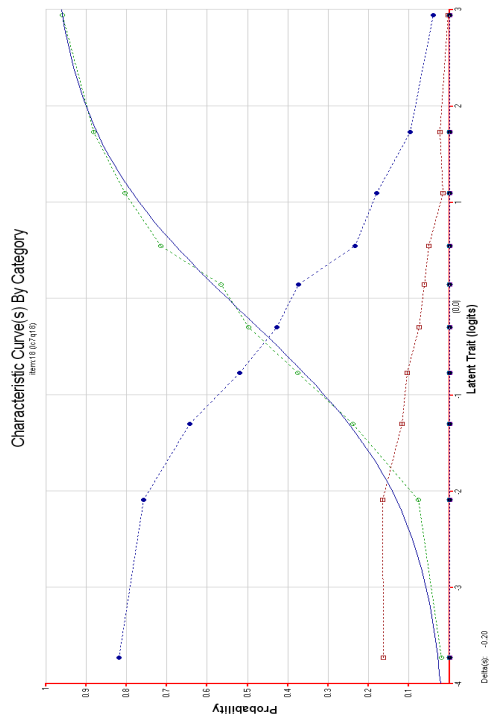
Year 7 Spelling

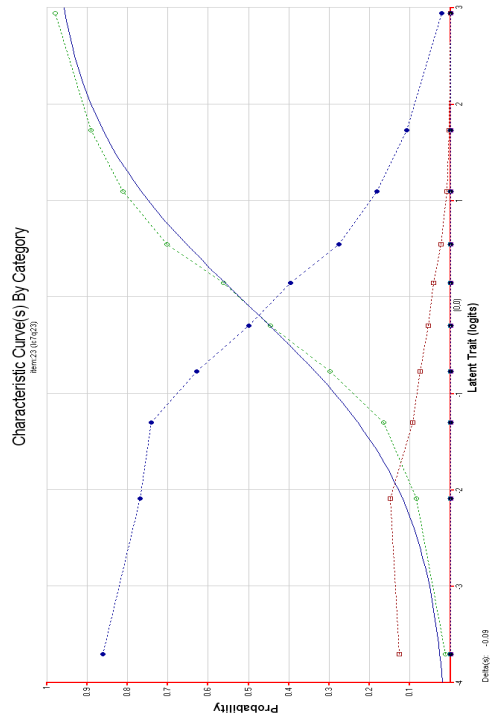
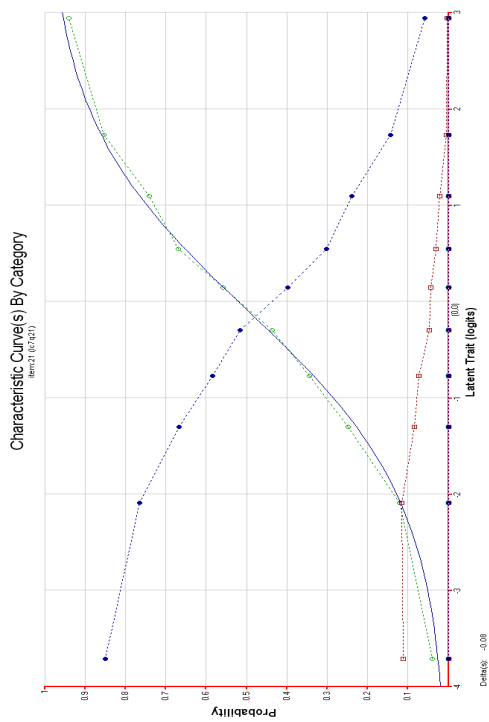
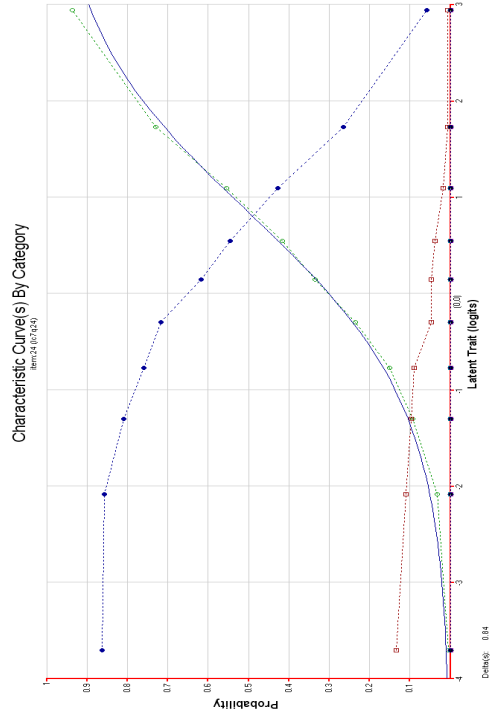
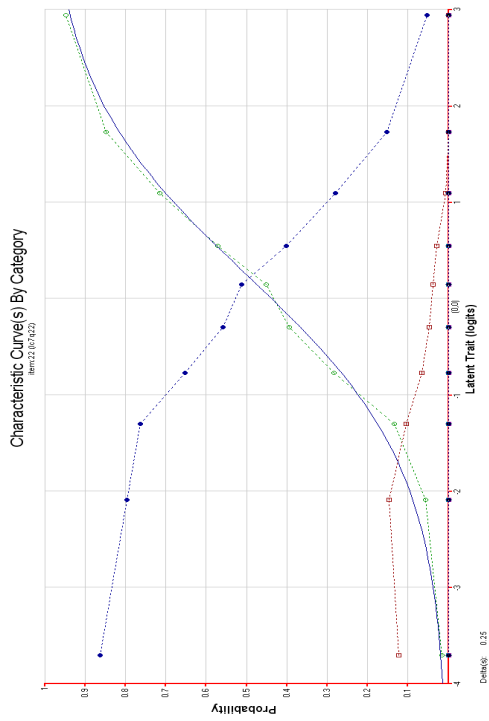


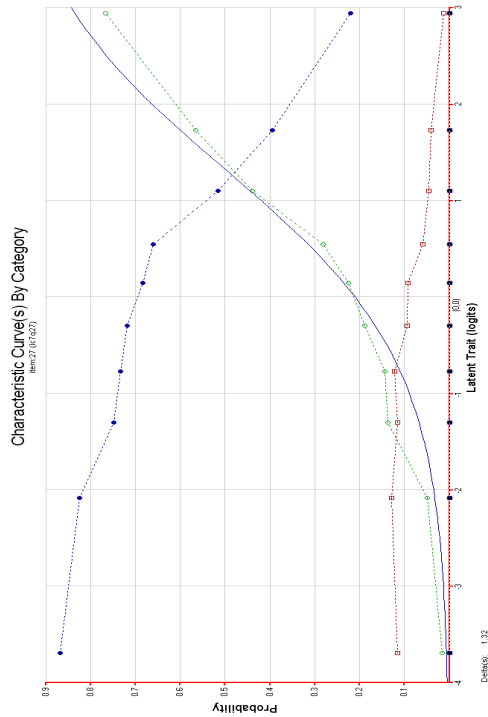
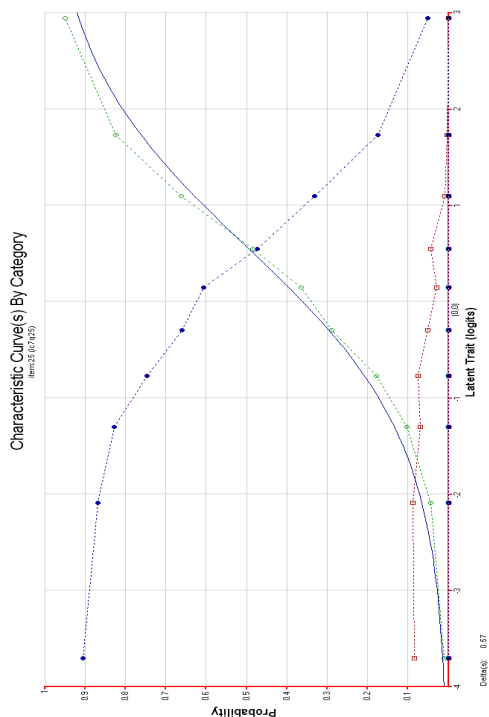
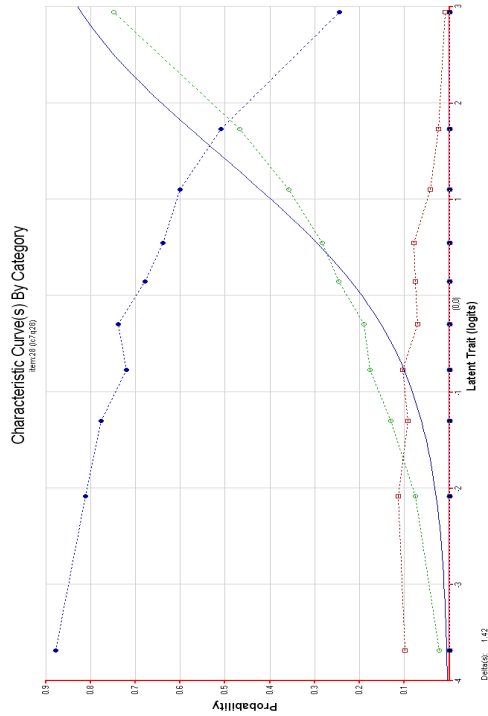
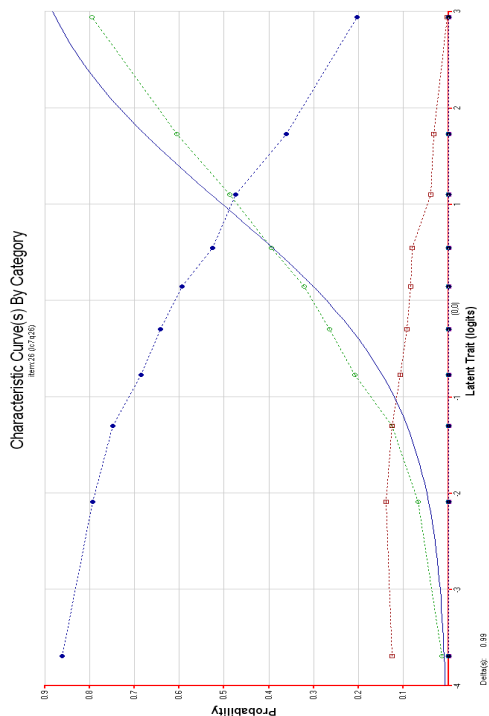


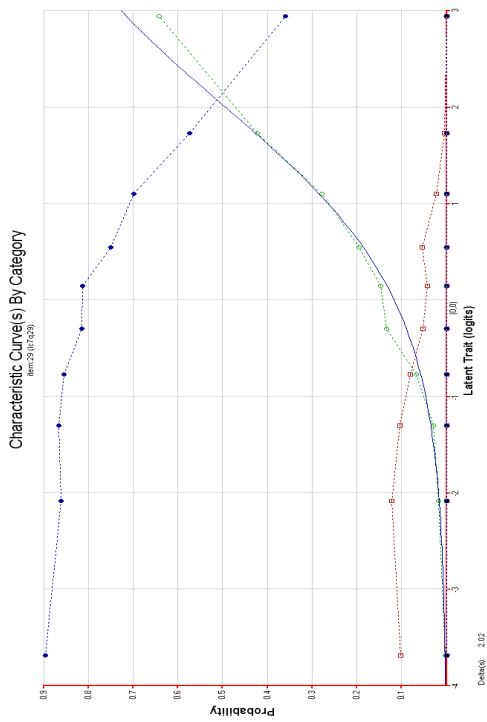
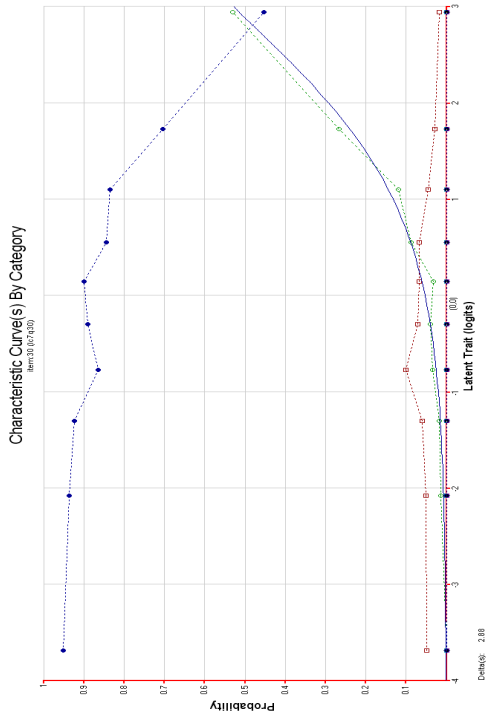




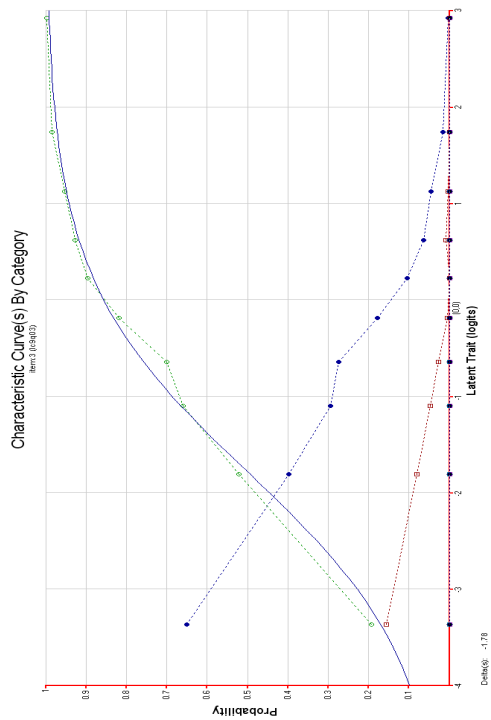
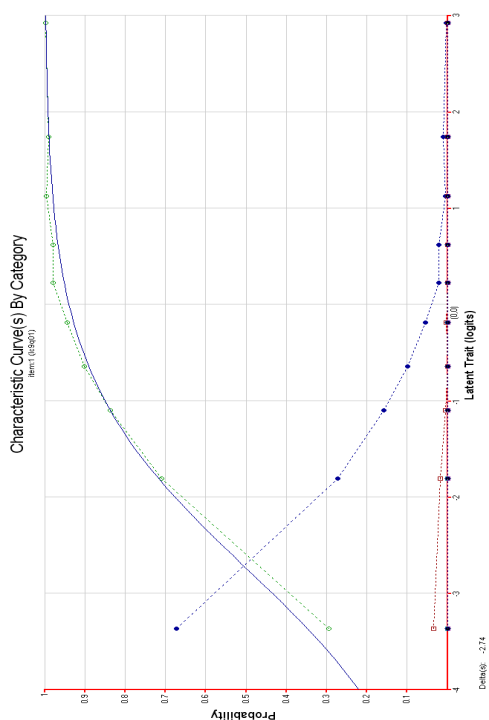
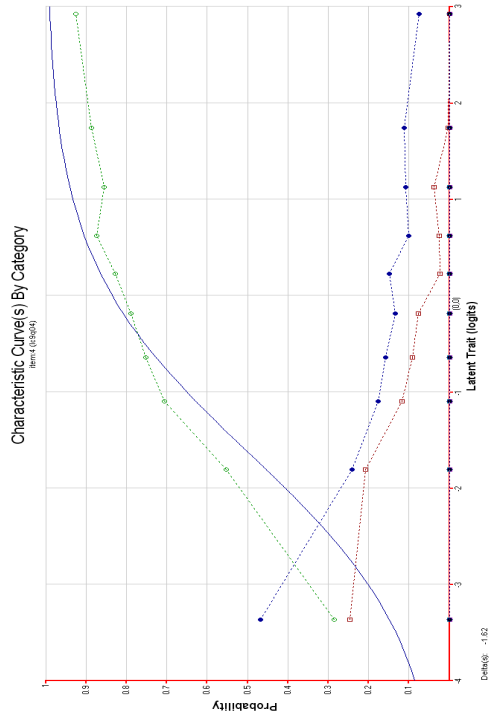
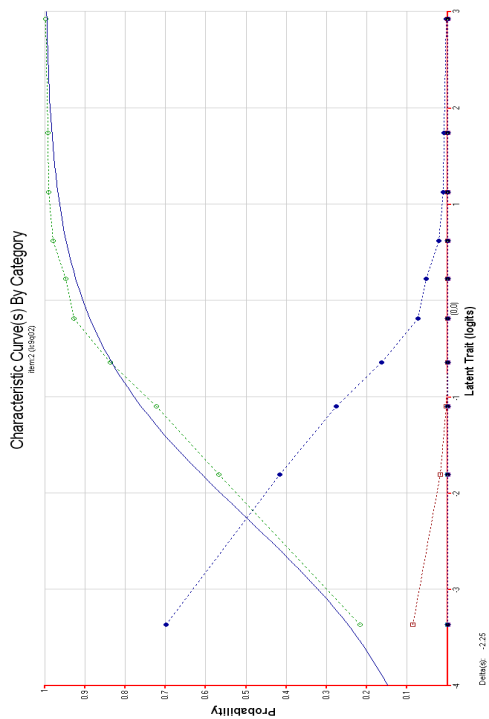


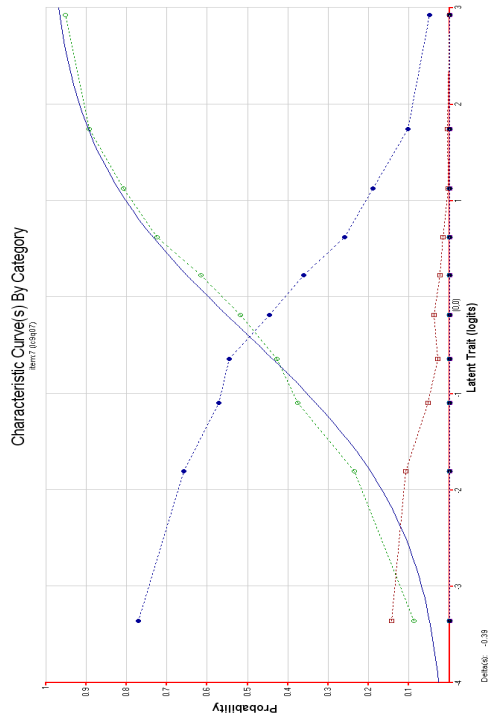
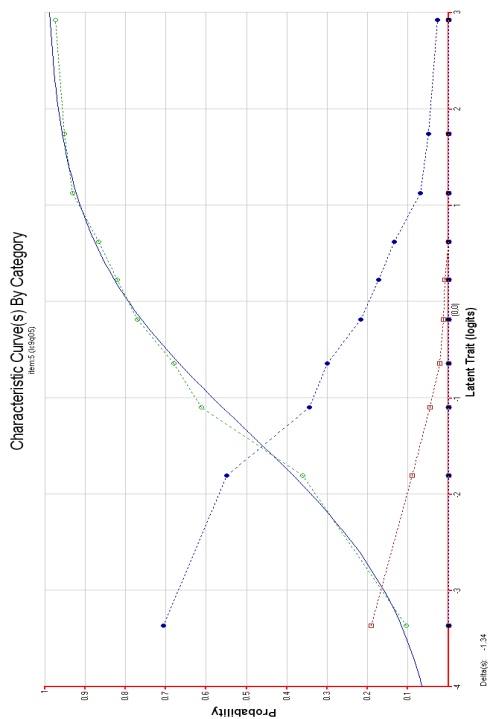
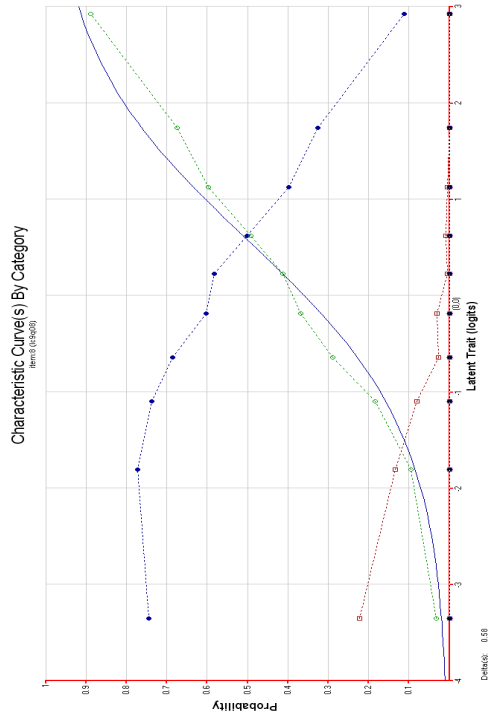
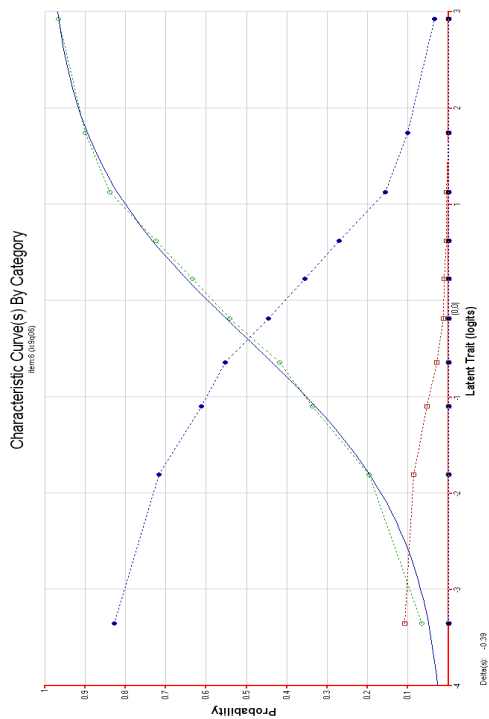


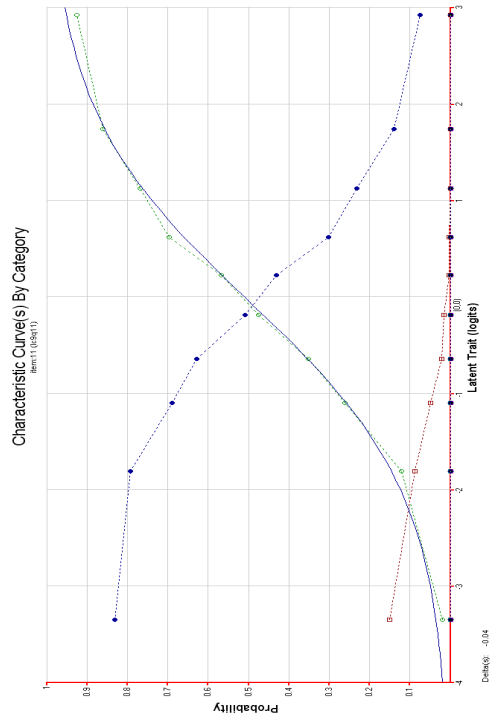
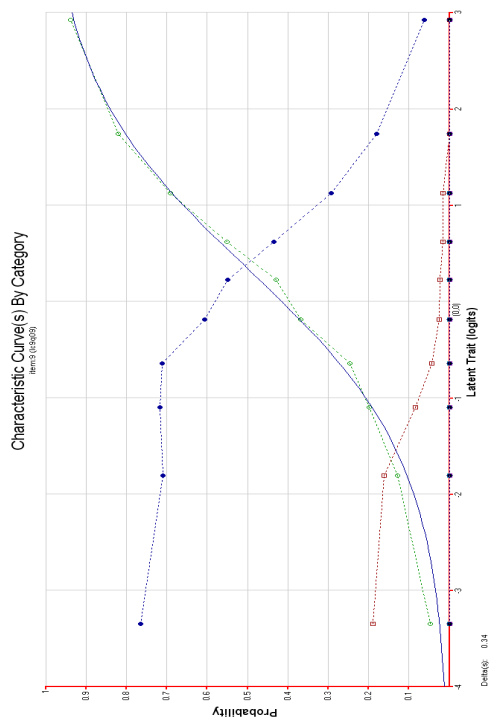
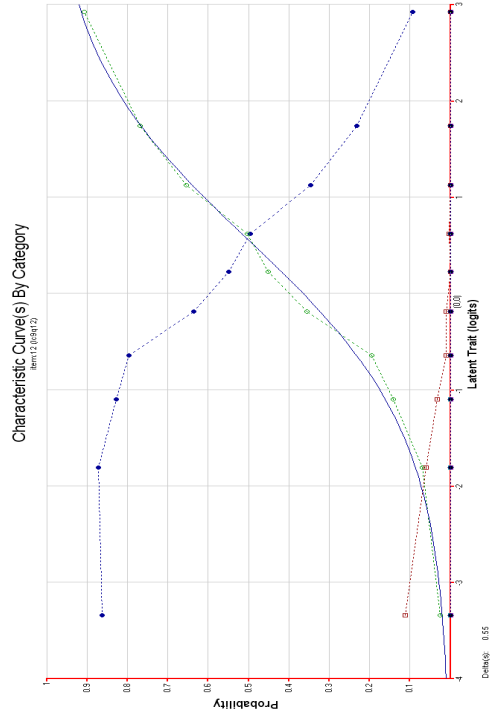
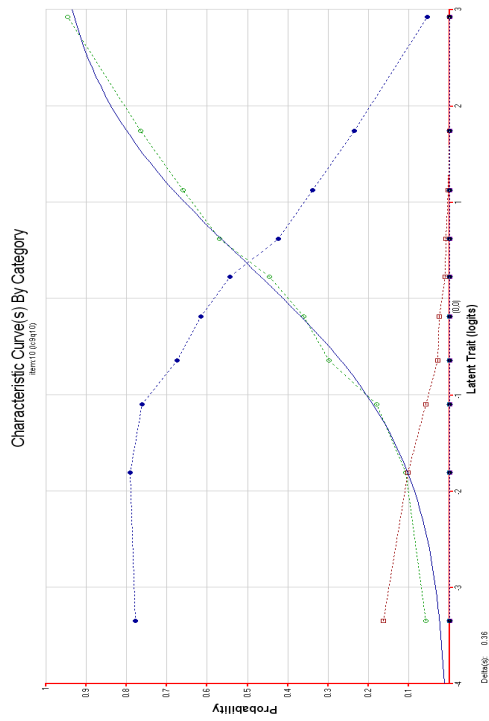


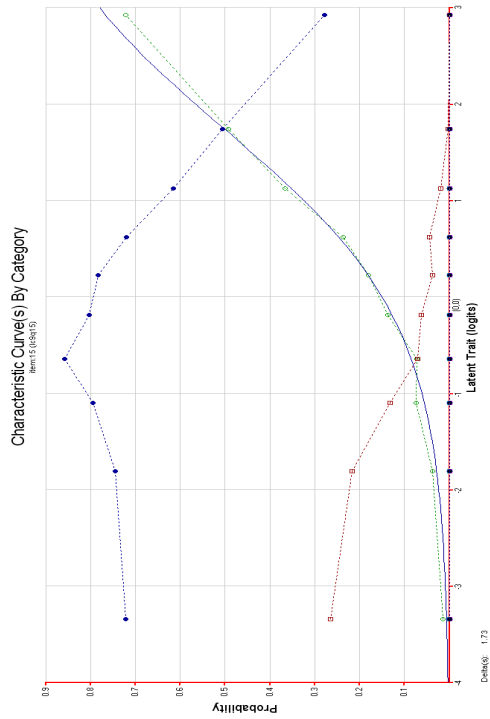
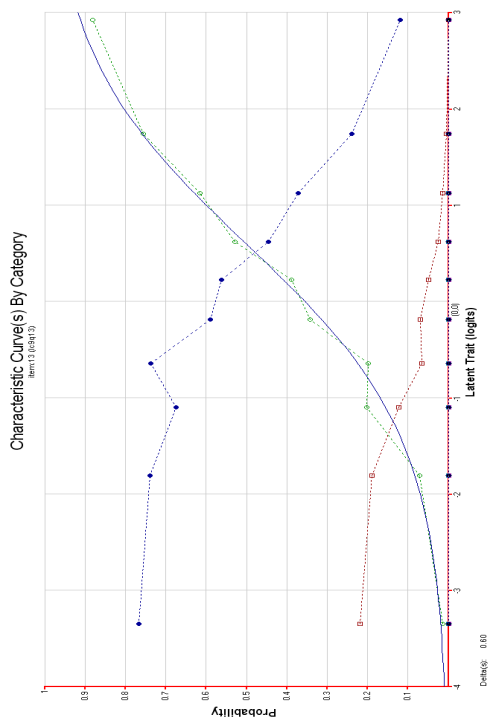
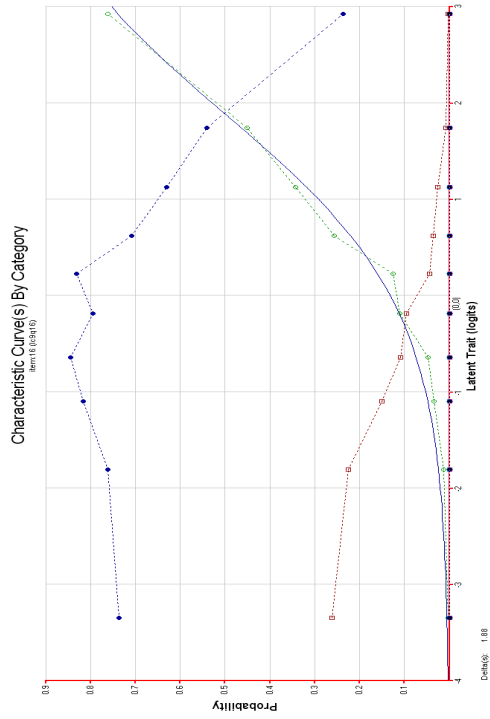
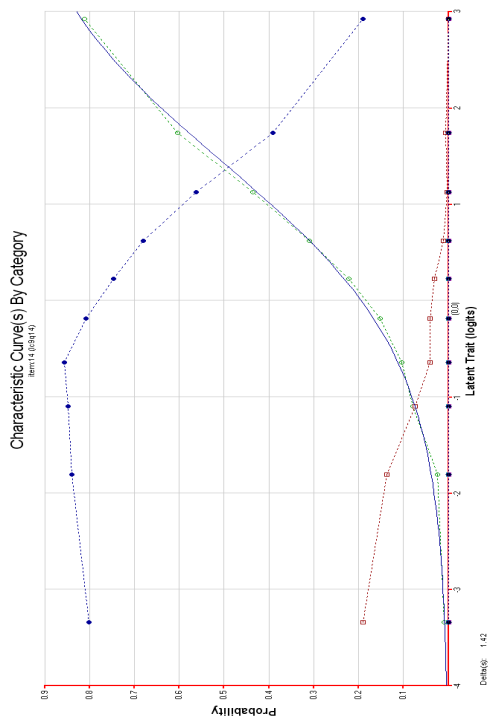


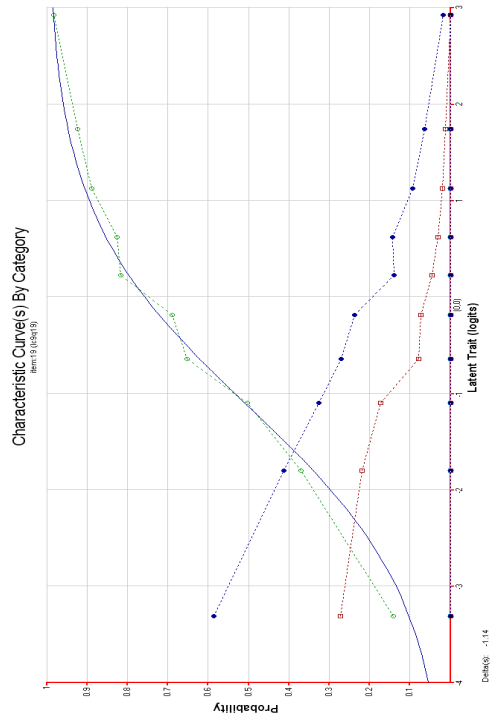
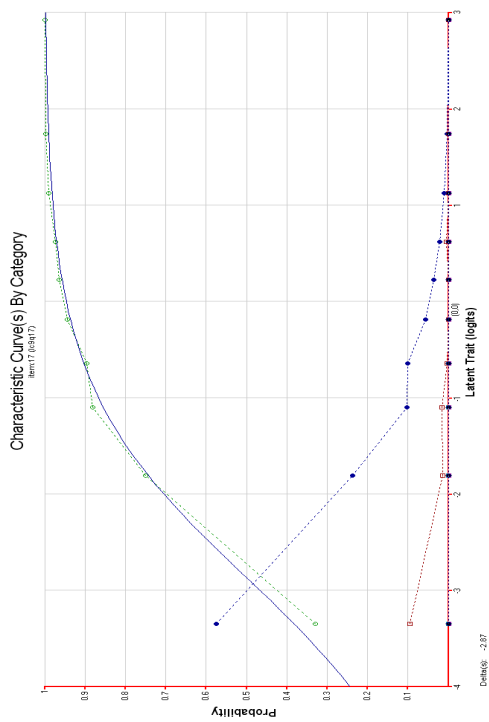
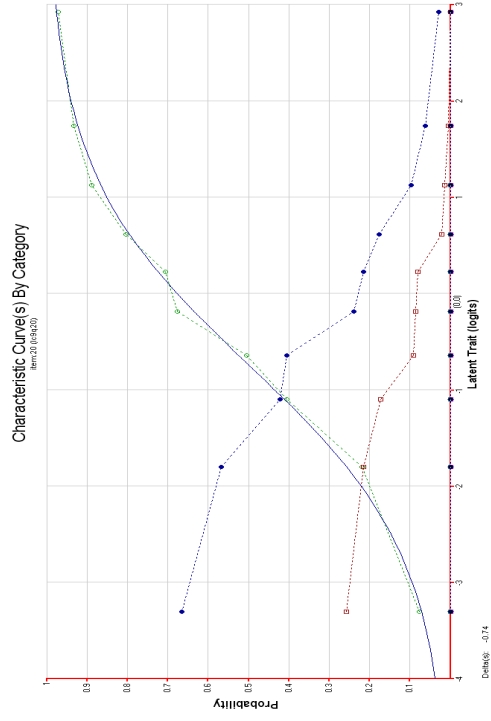
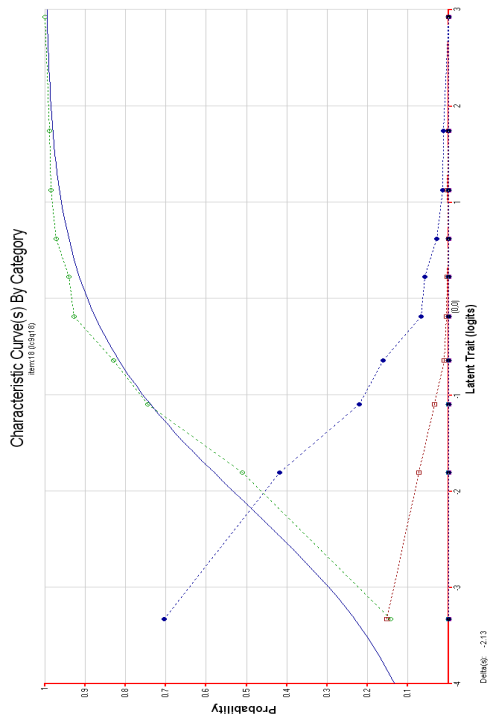
Year 9 Spelling

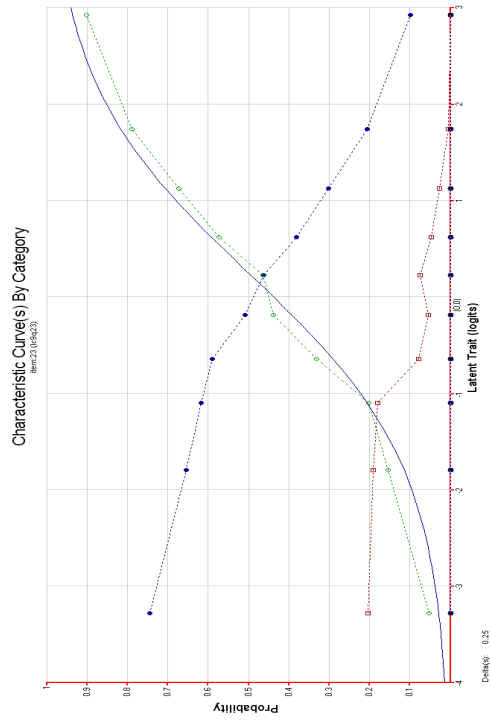
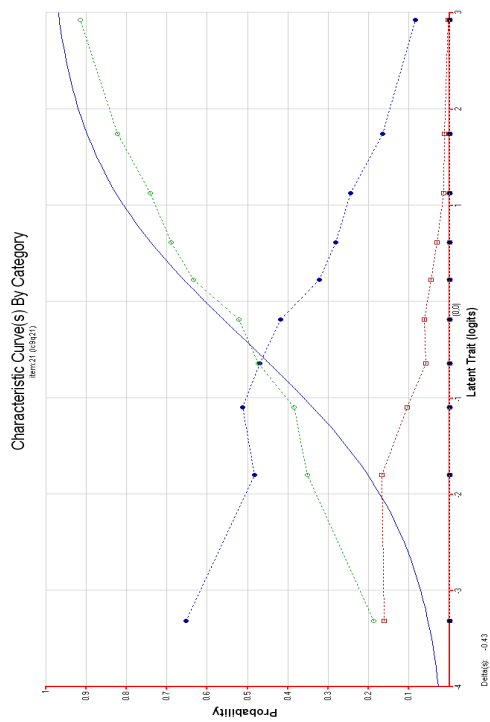
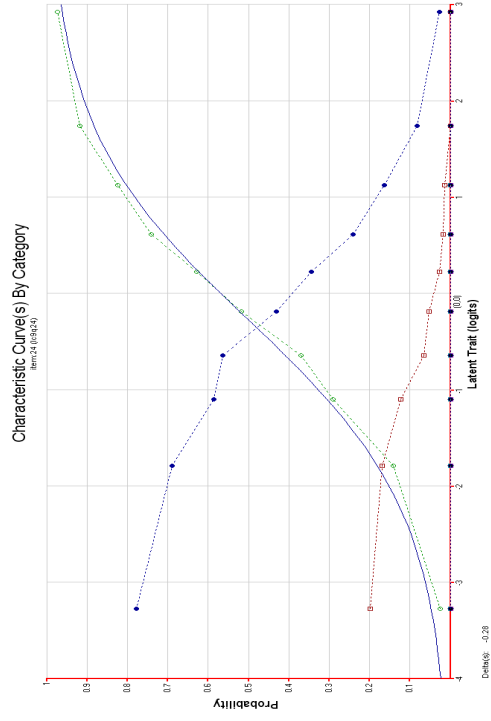
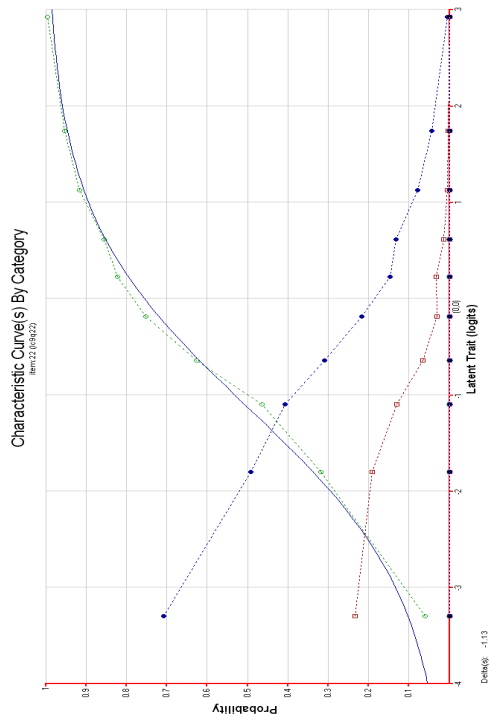


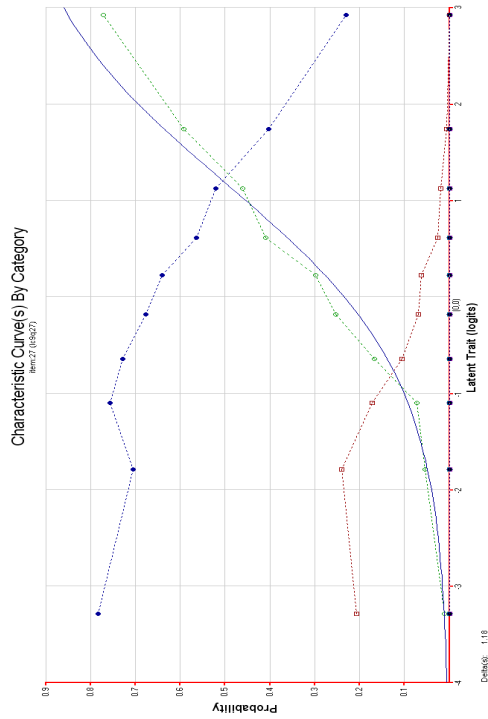
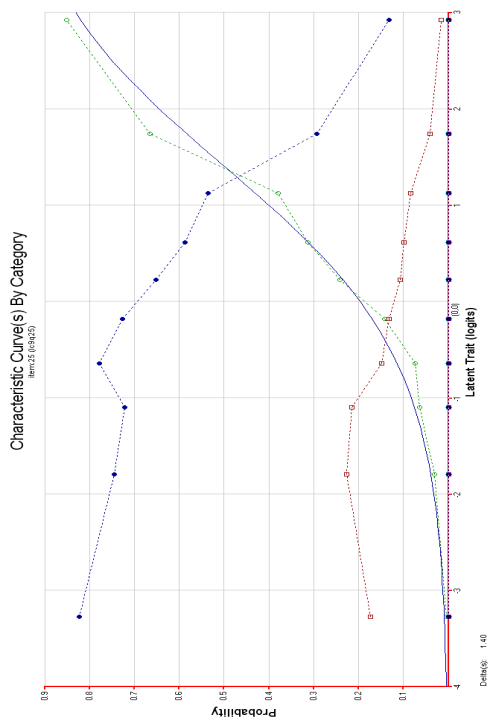
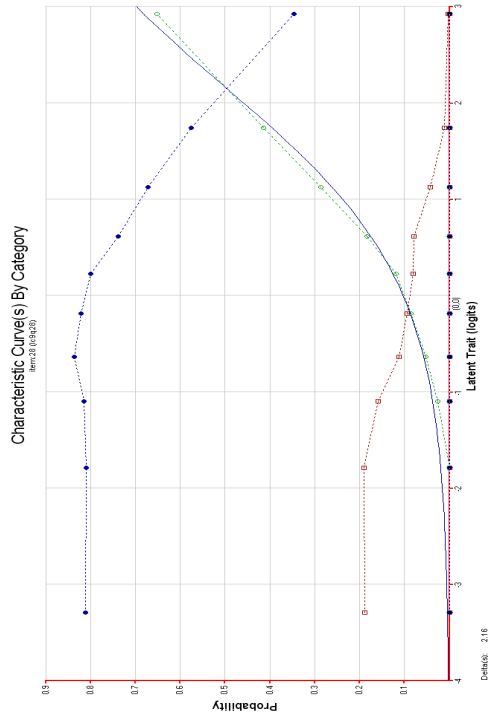
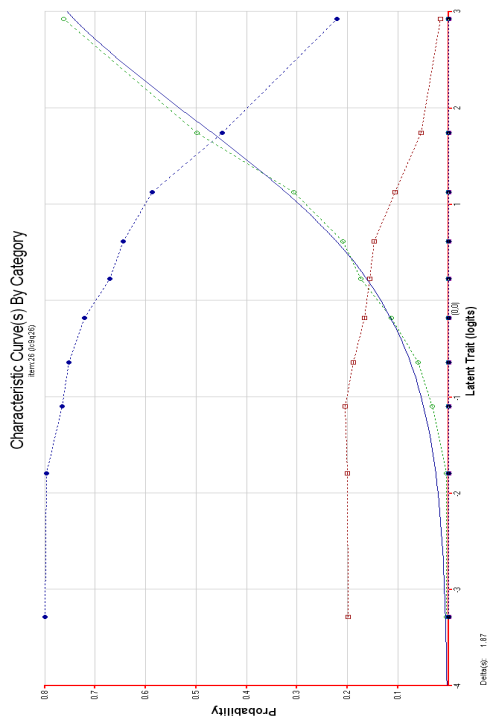


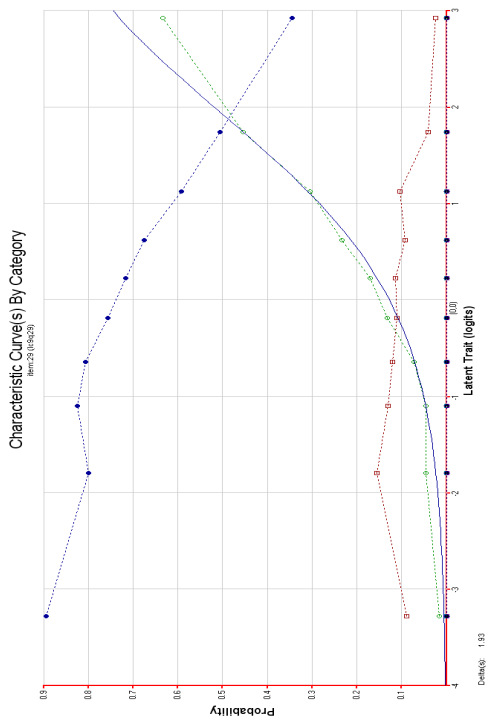
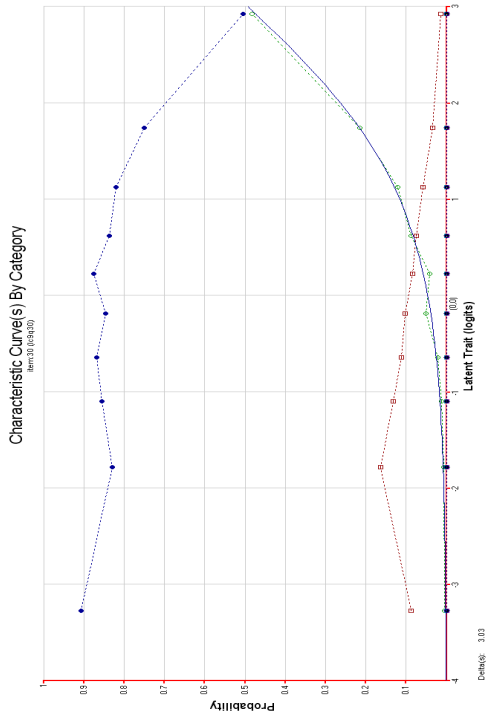




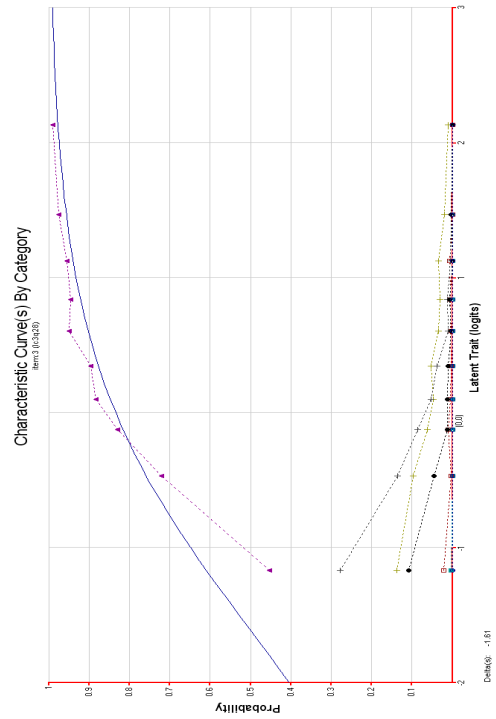
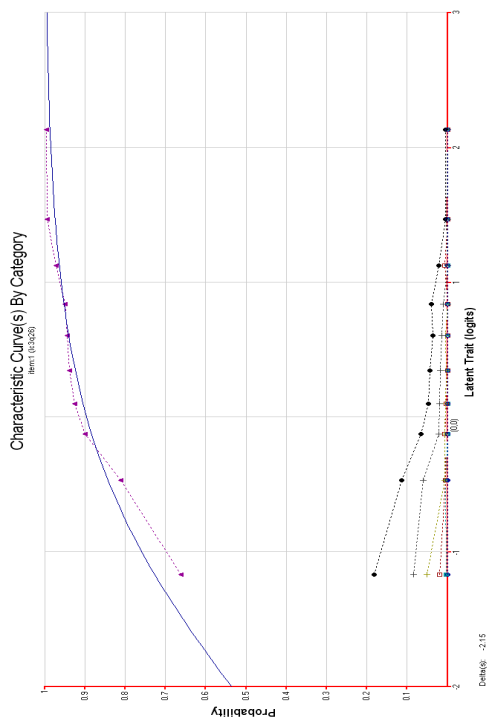
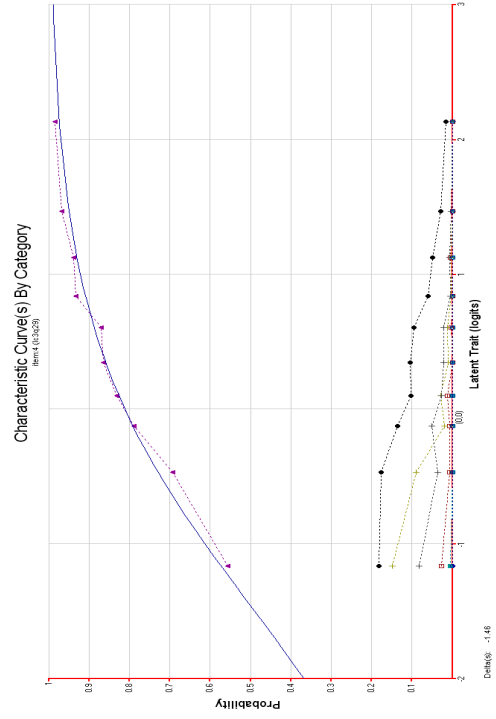
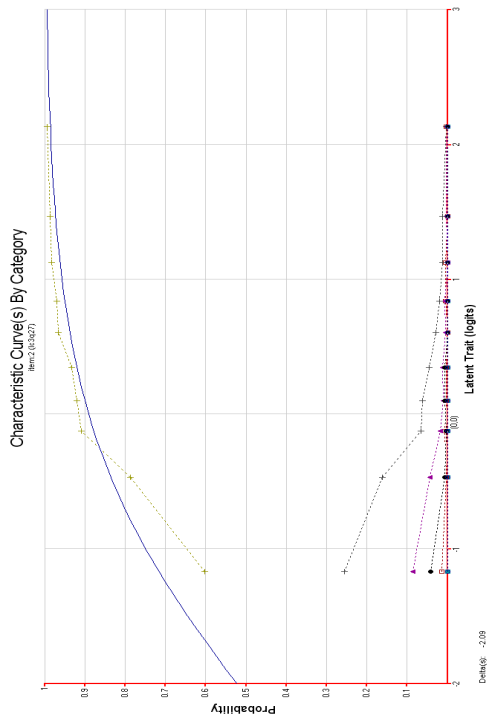


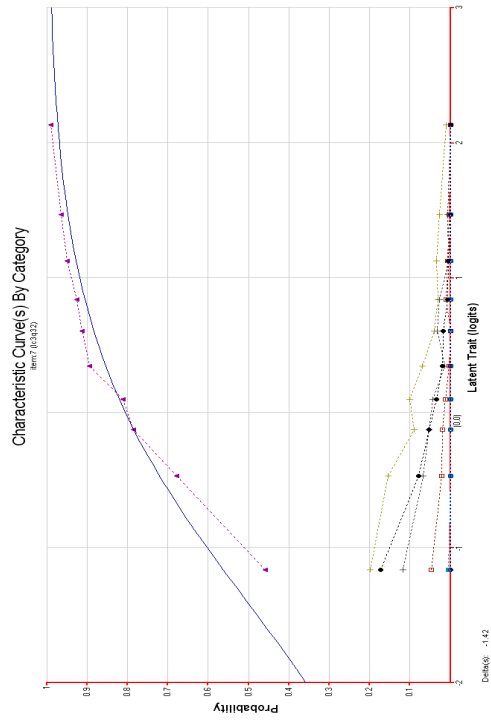
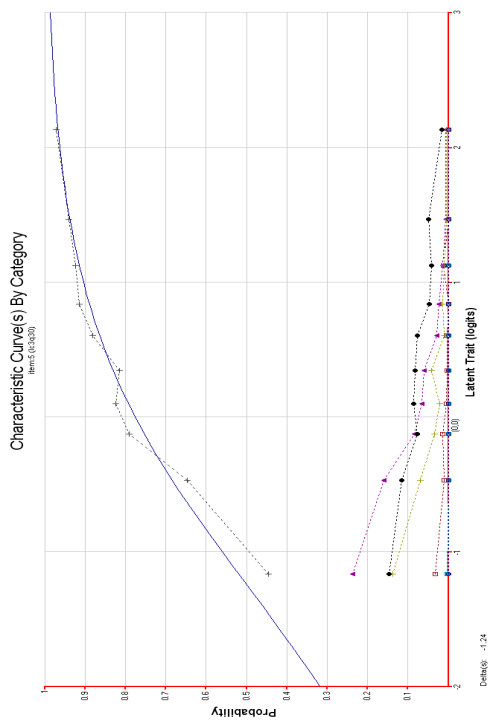
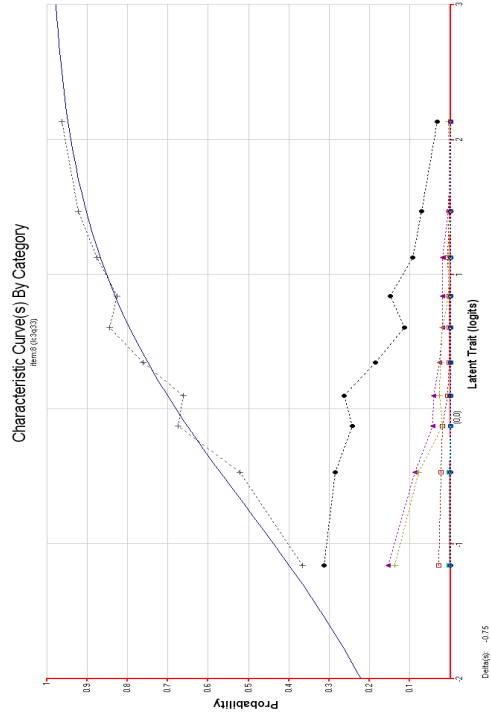
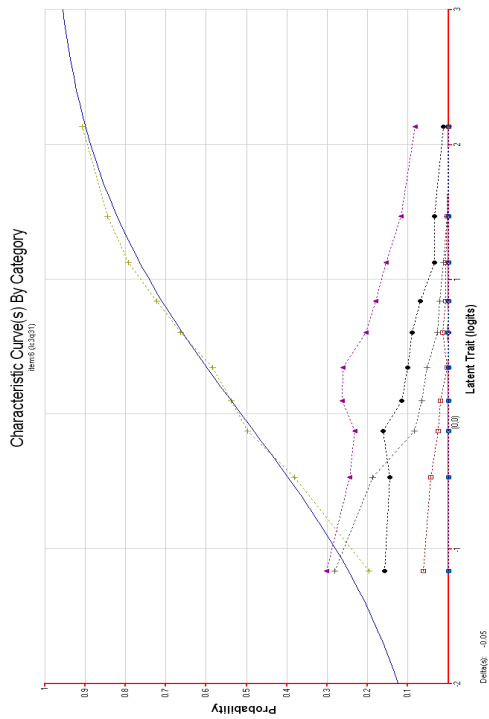


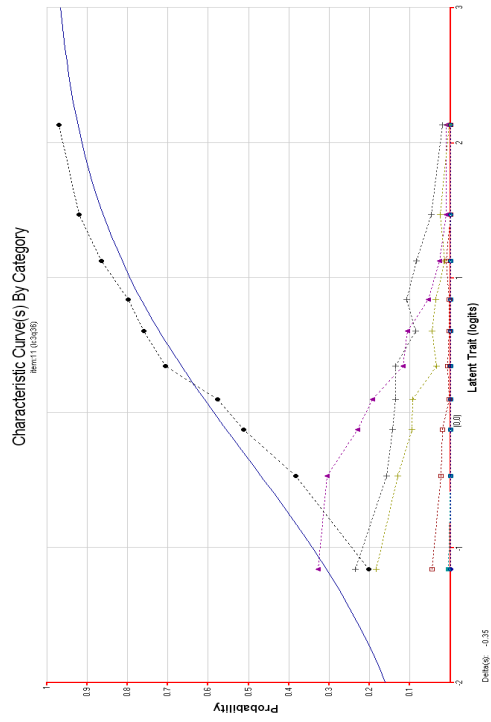
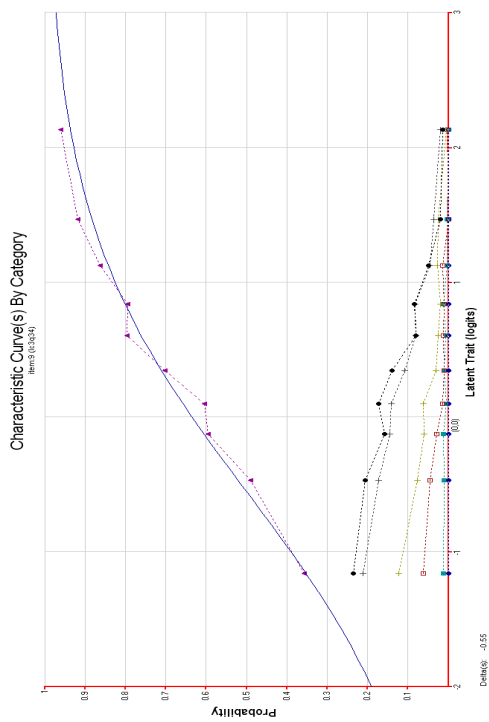
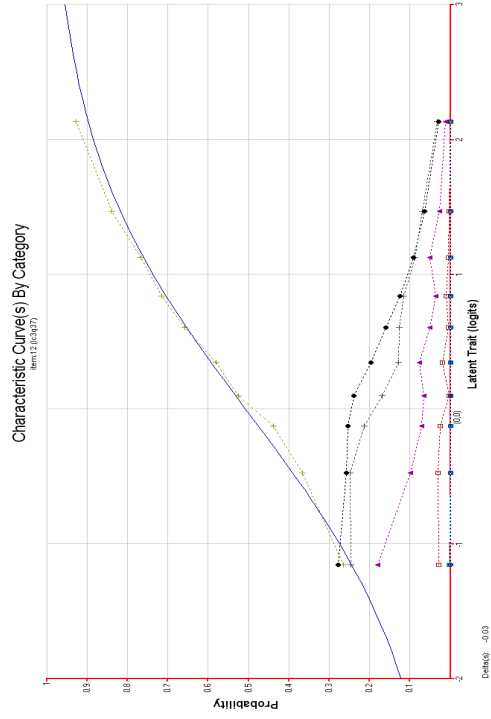
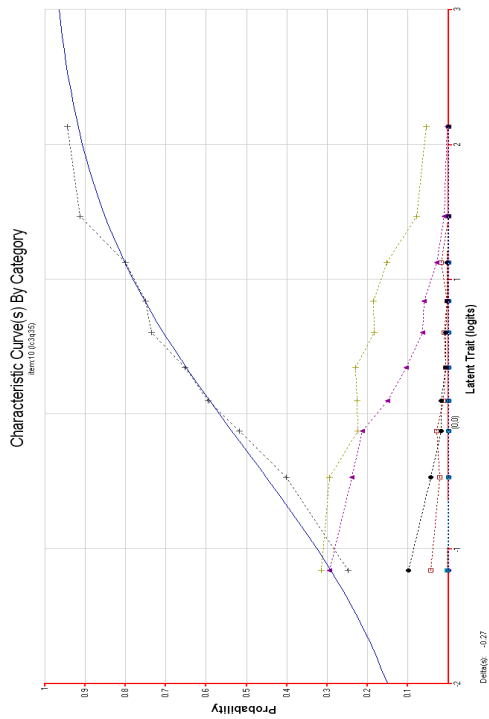


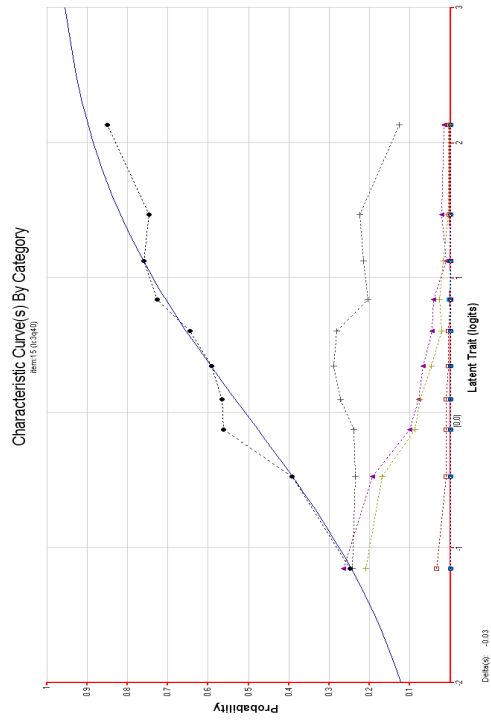
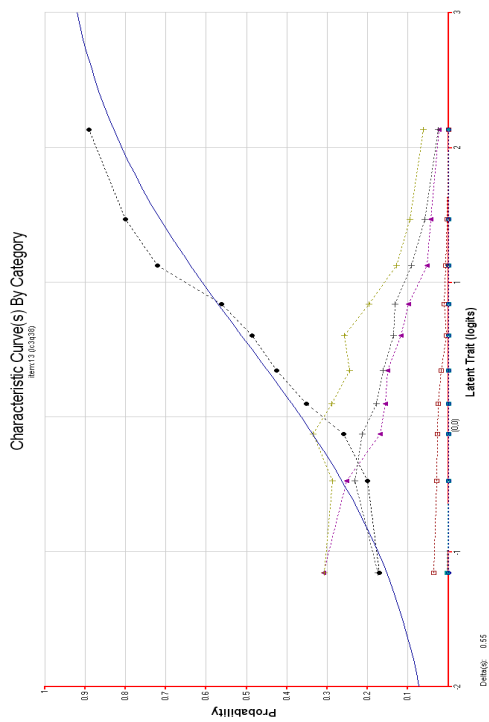
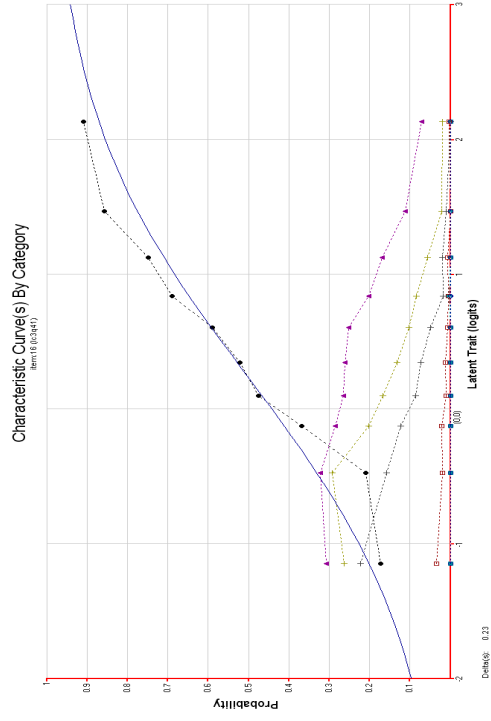
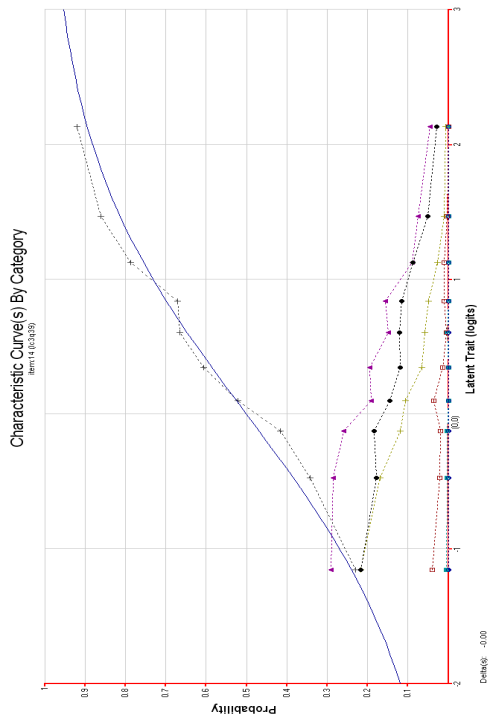


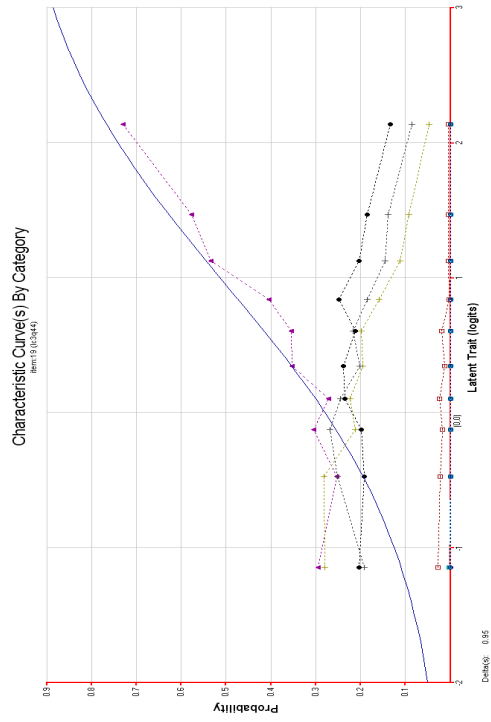
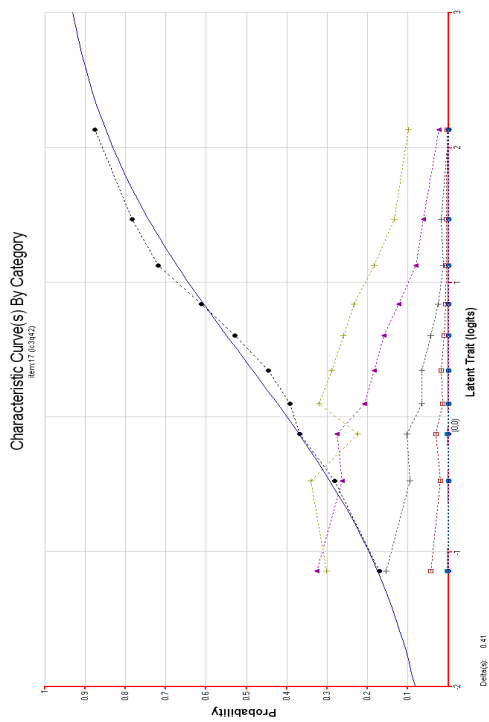
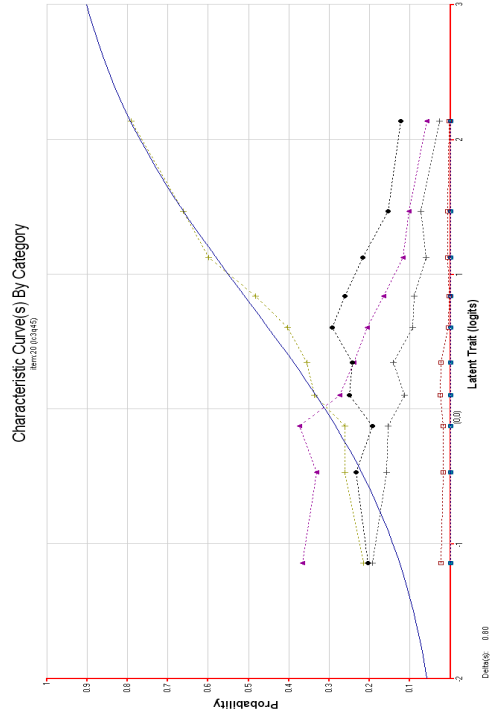
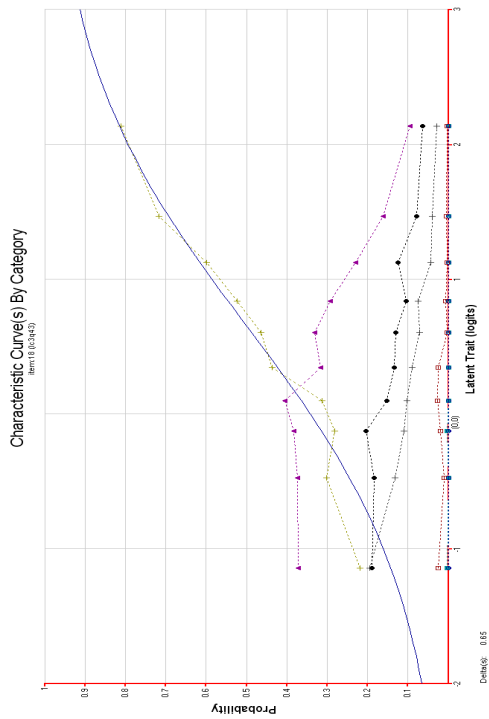
Year 3 Grammar and Punctuation

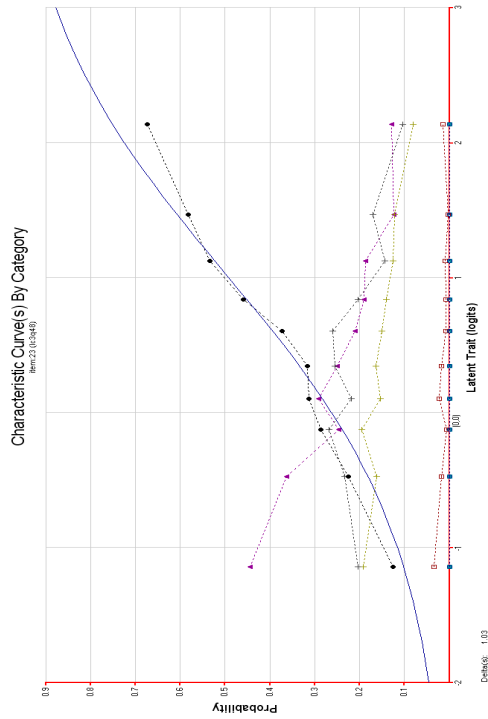
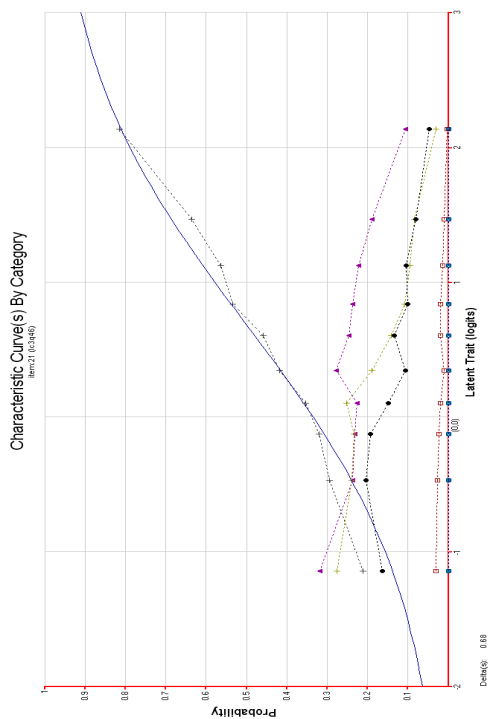
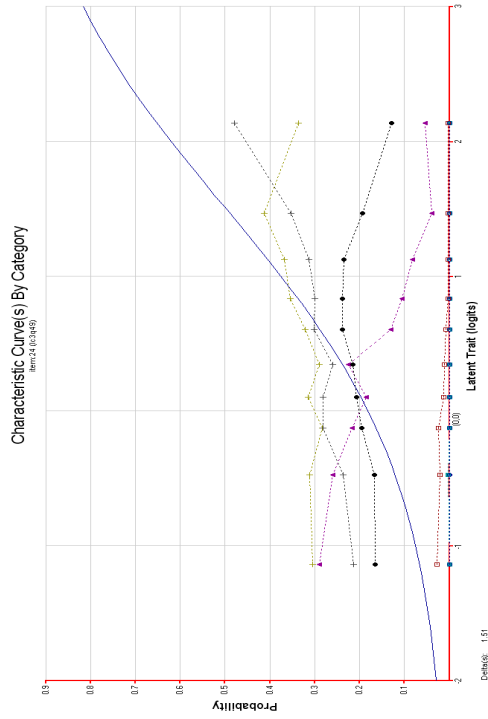
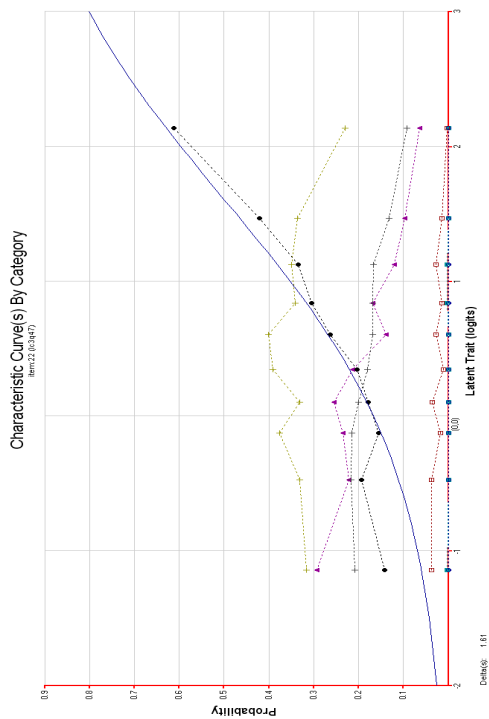


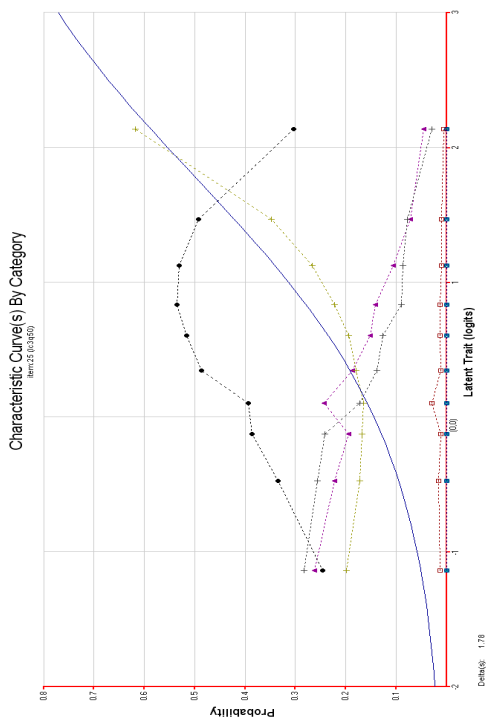
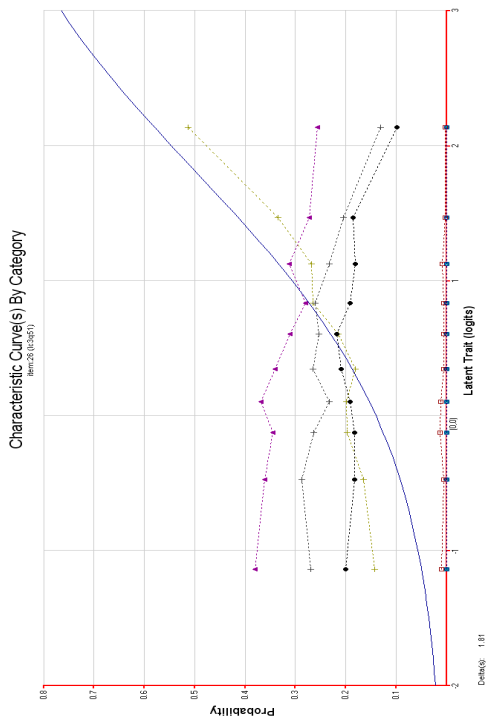




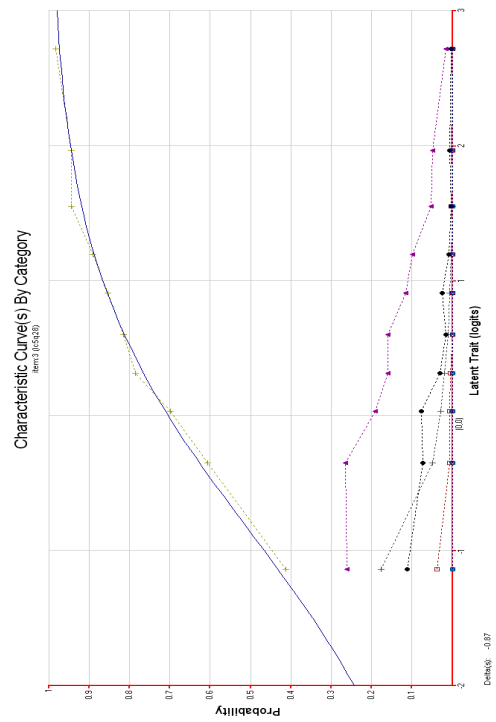
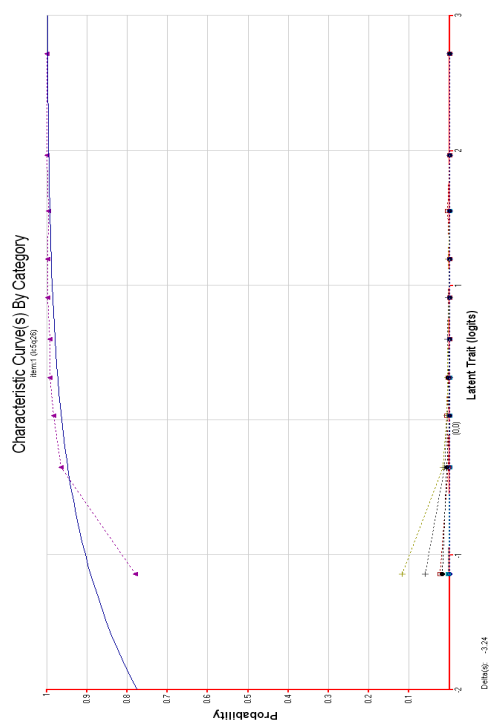
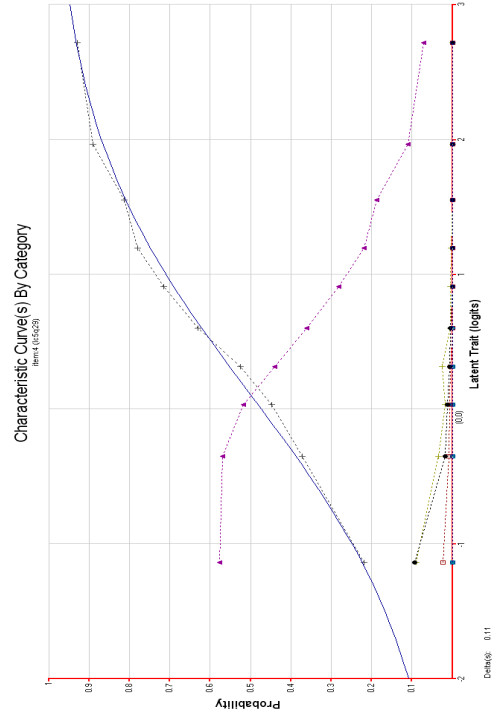
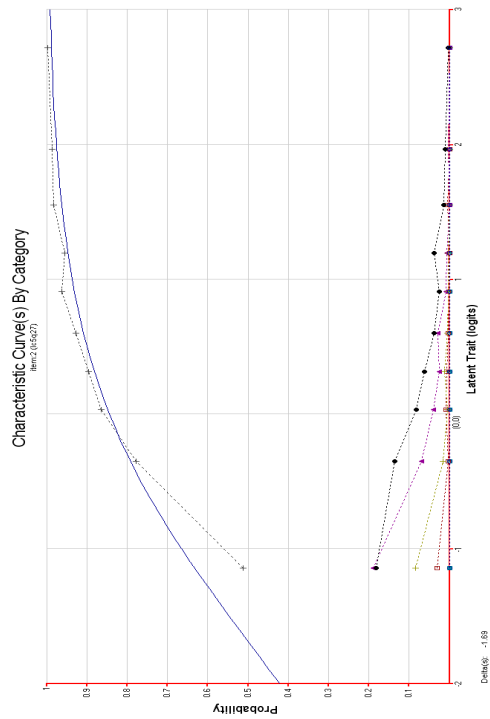


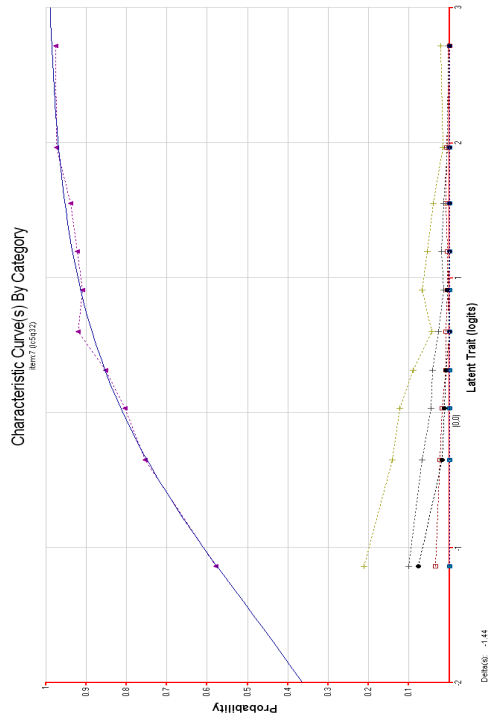
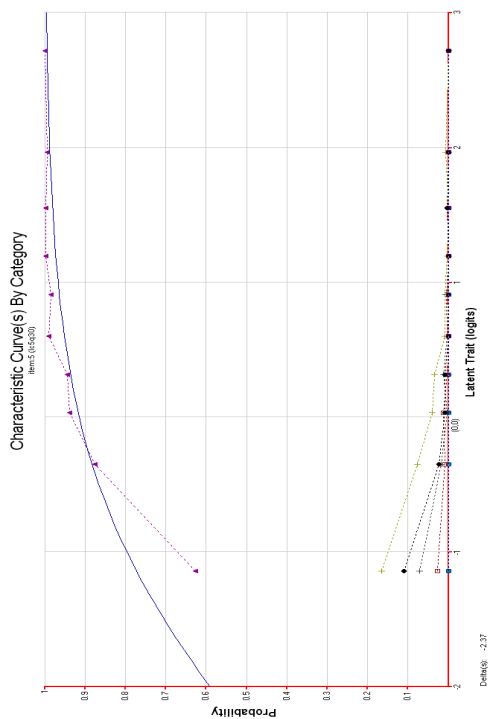
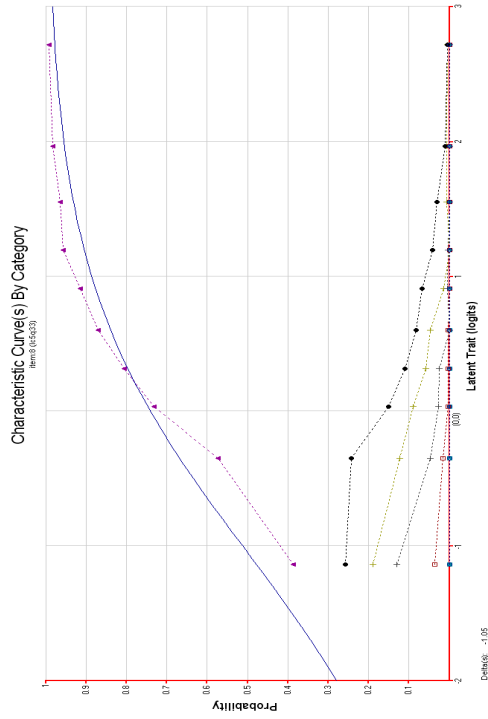
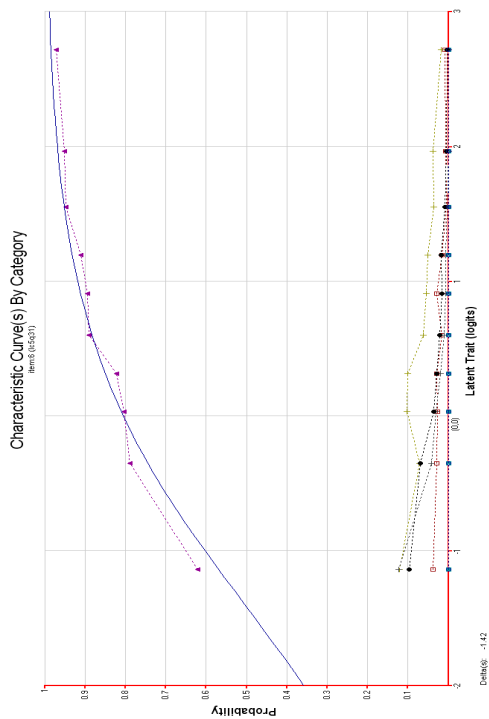


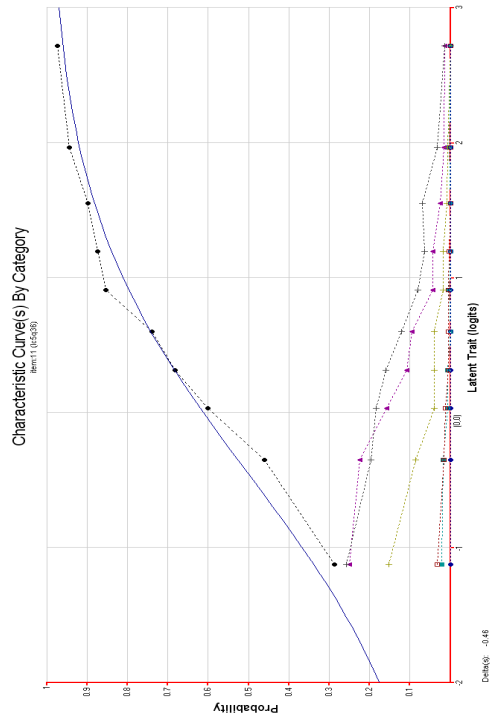
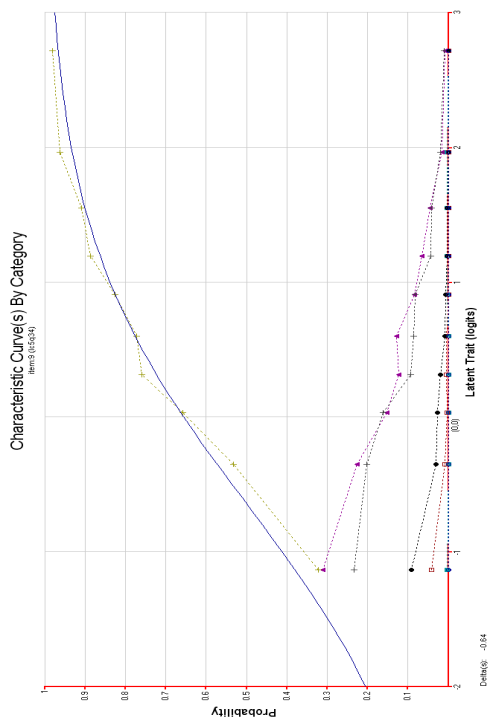
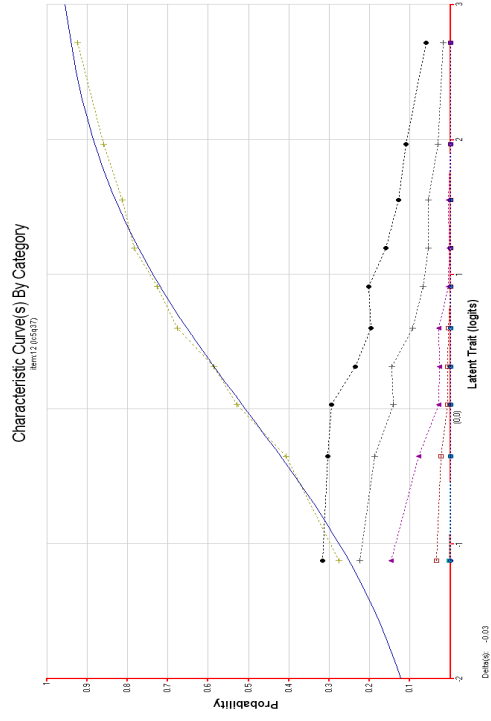
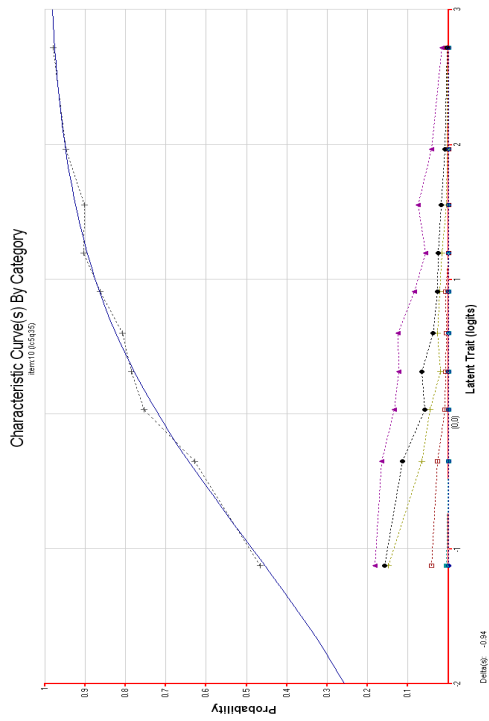


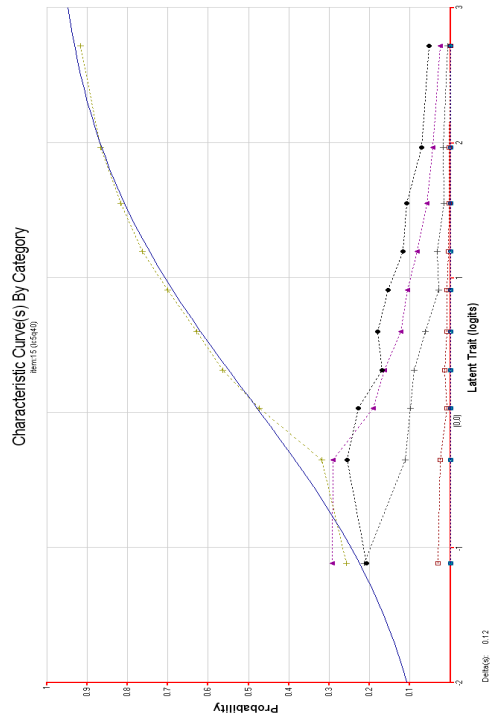
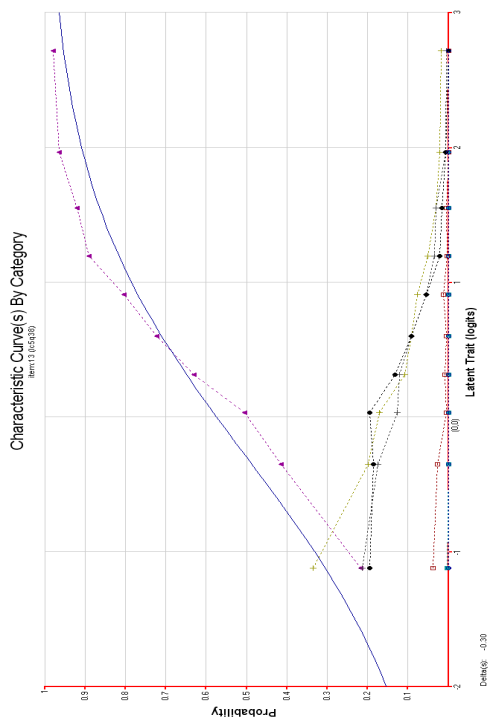
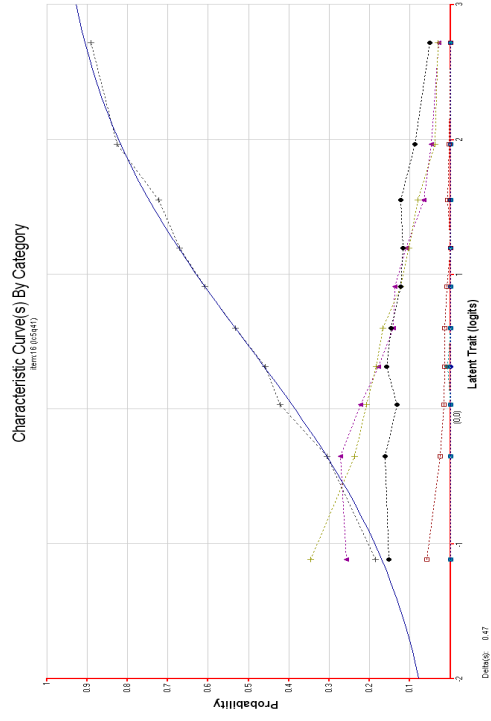
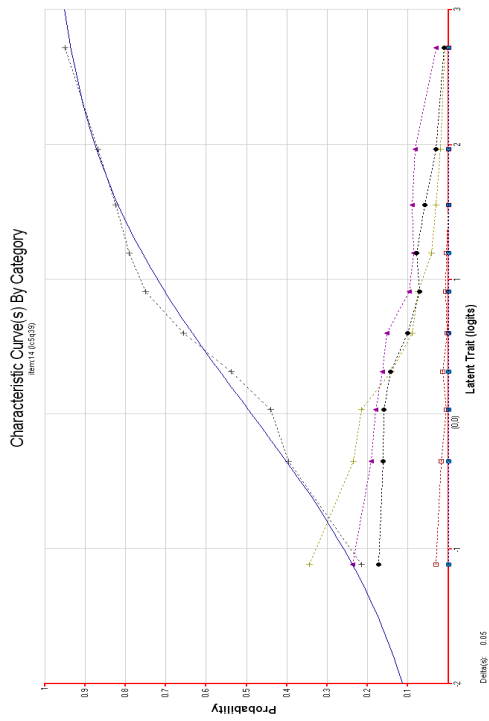


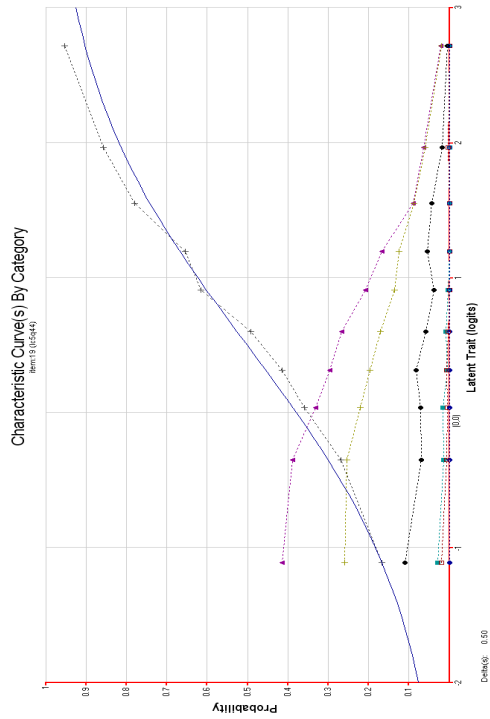
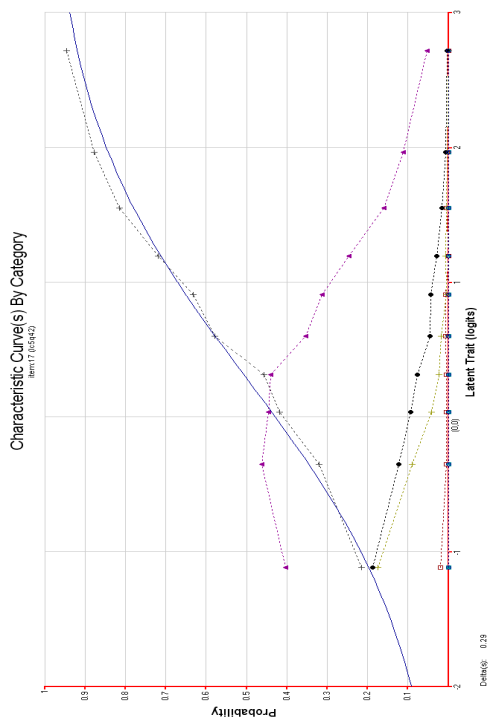
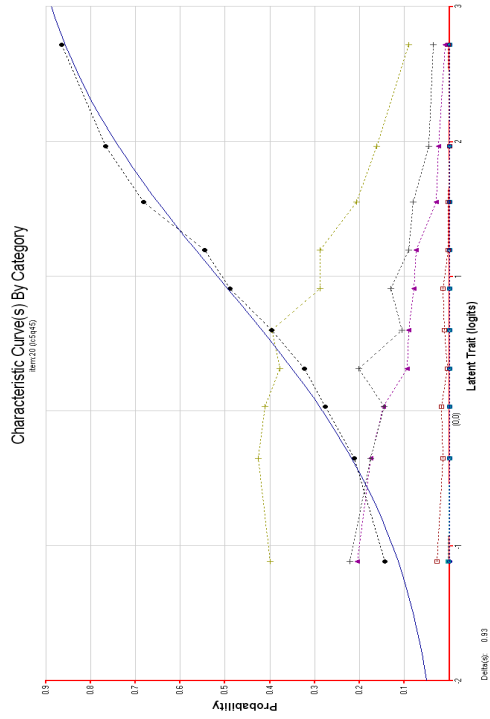
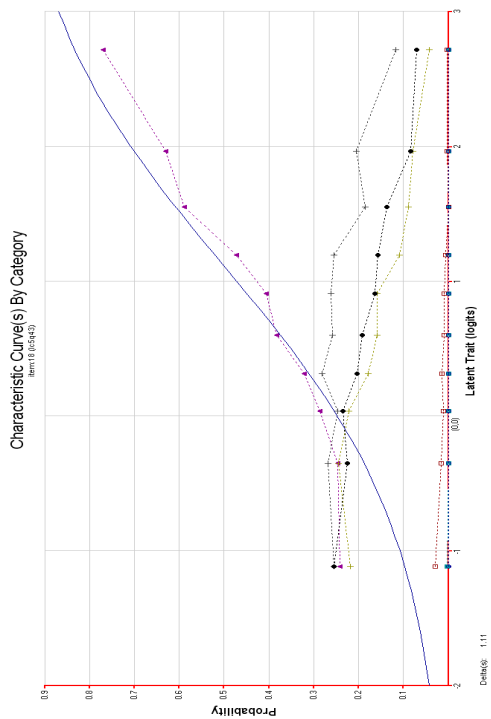
Year 5 Grammar and Punctuation

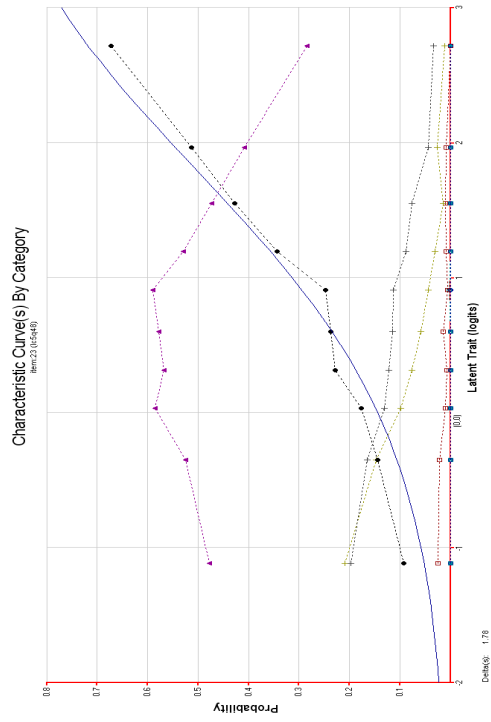
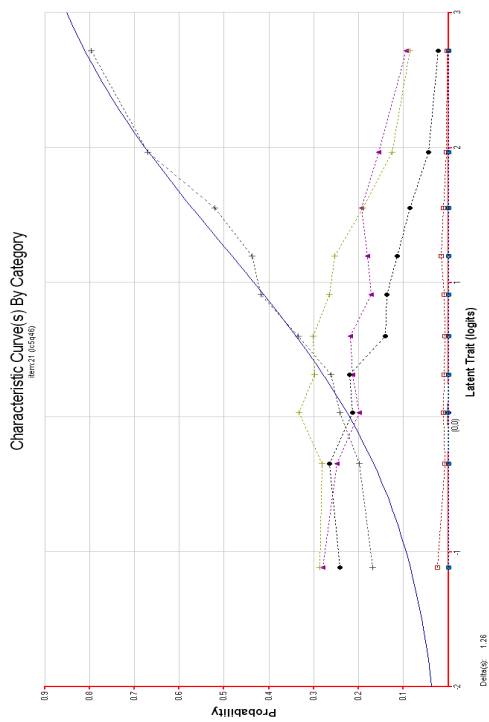
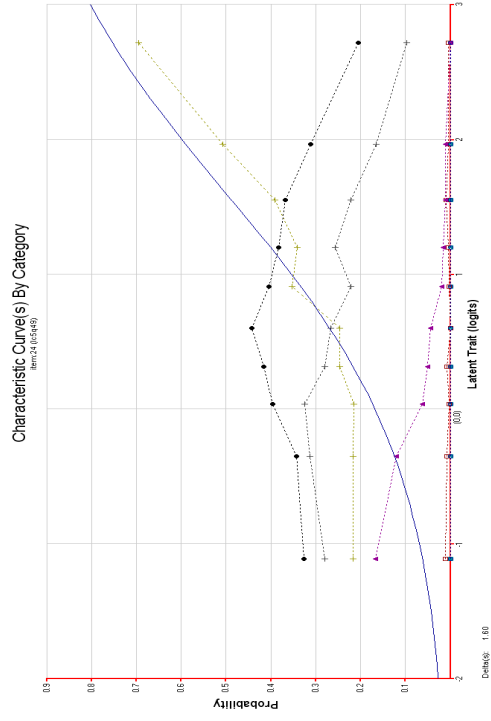
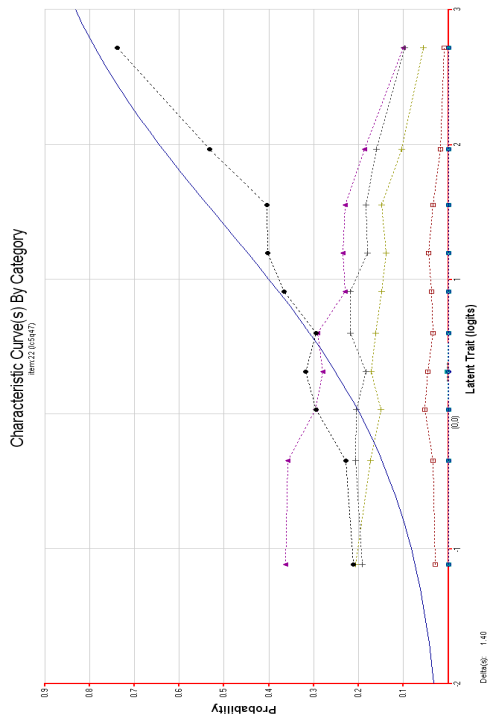


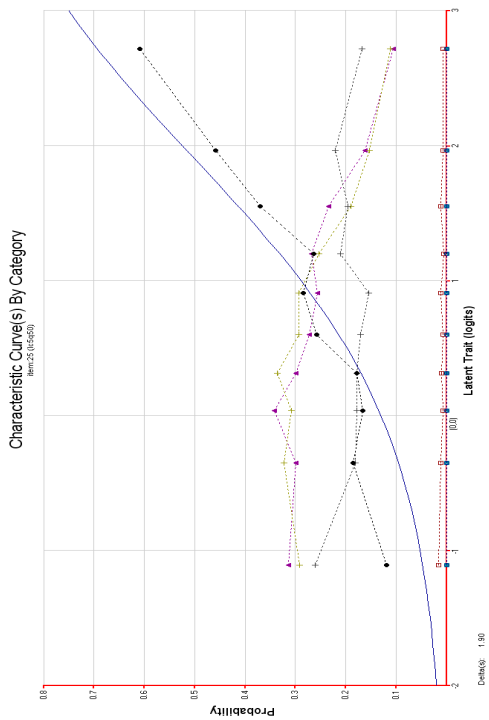
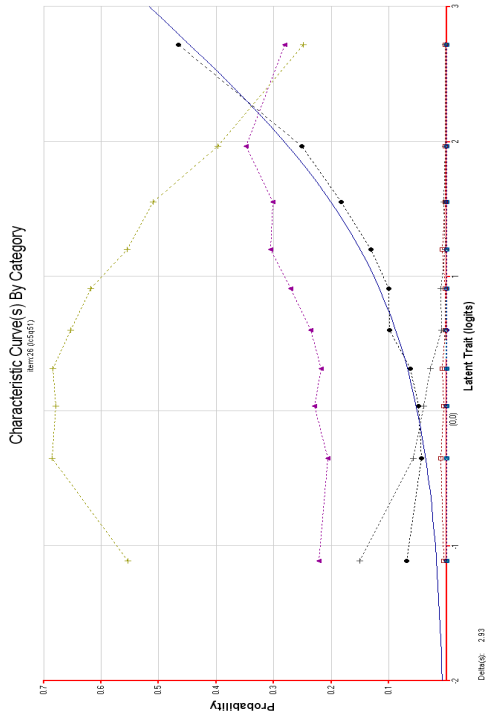




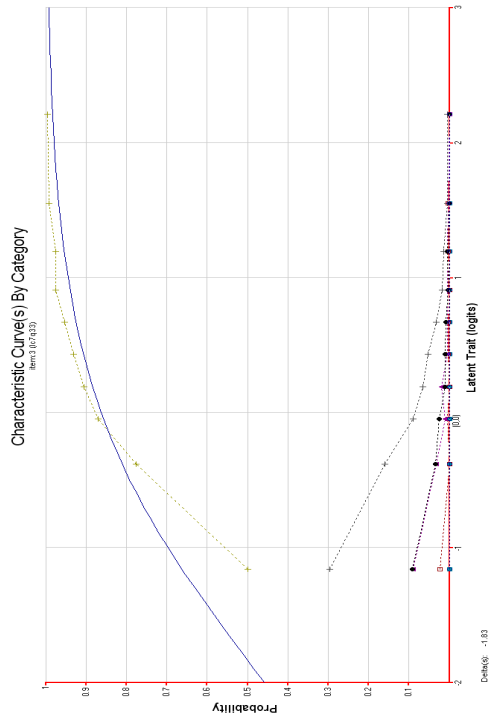
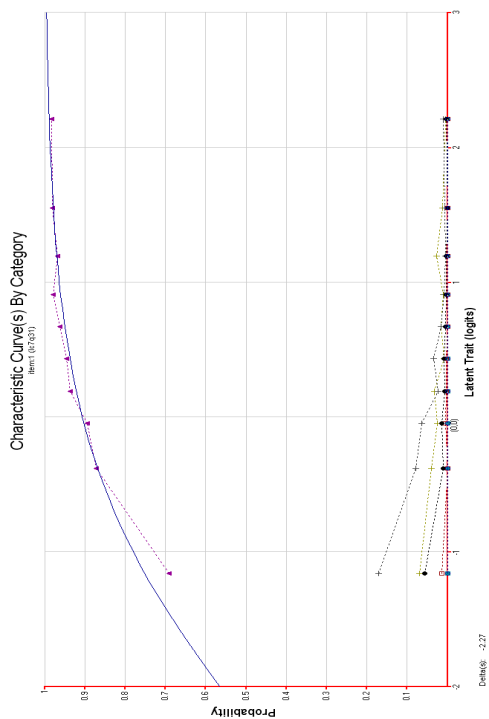
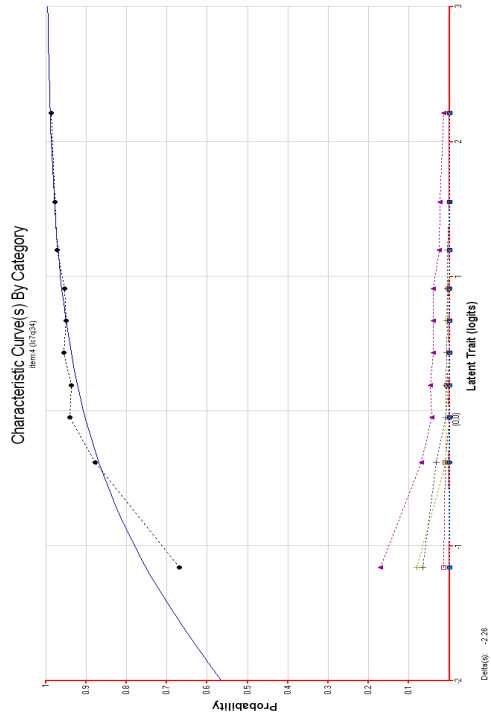
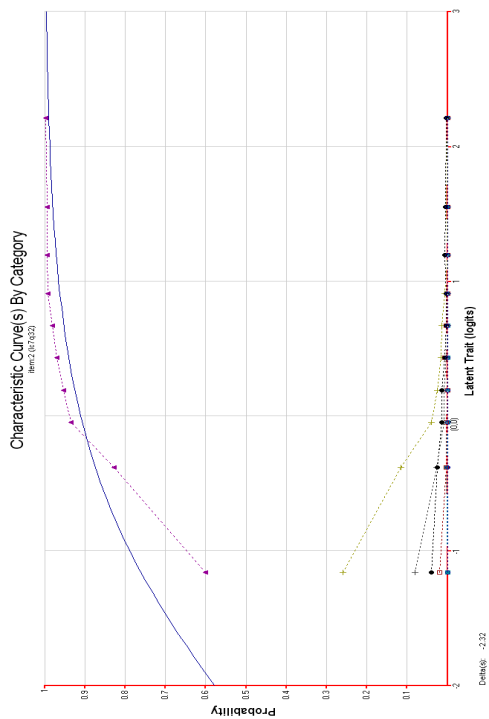


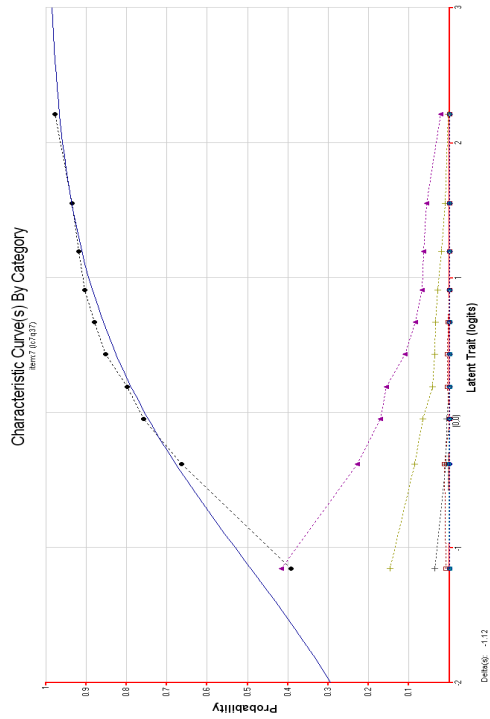
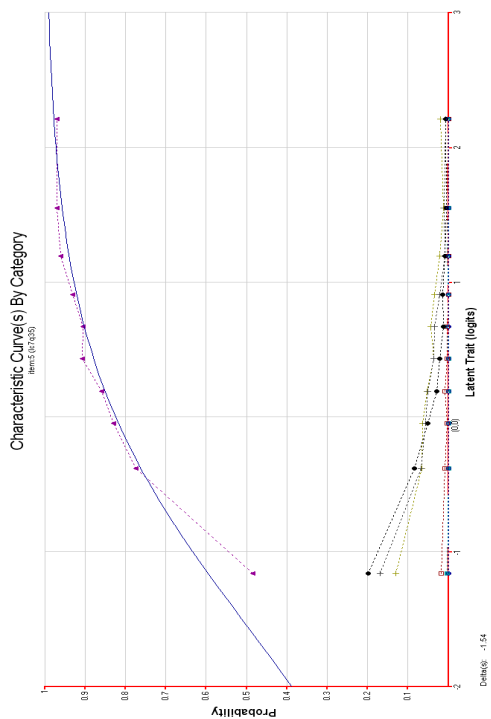
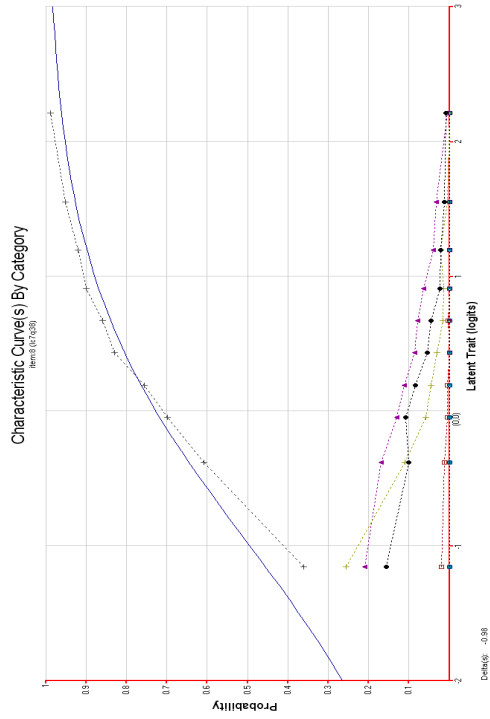
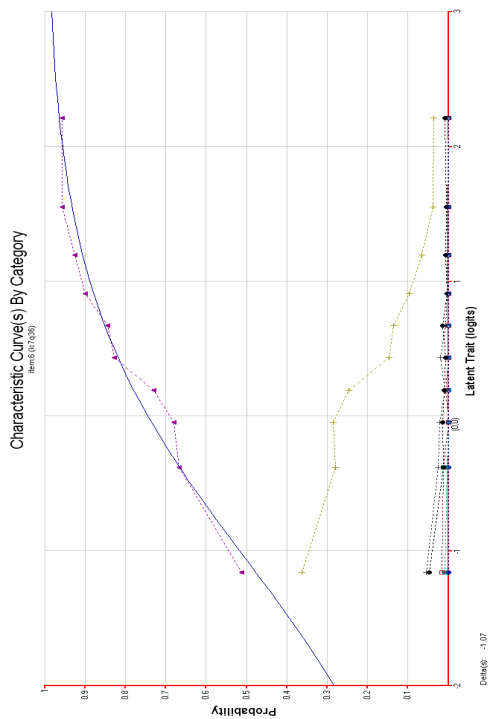


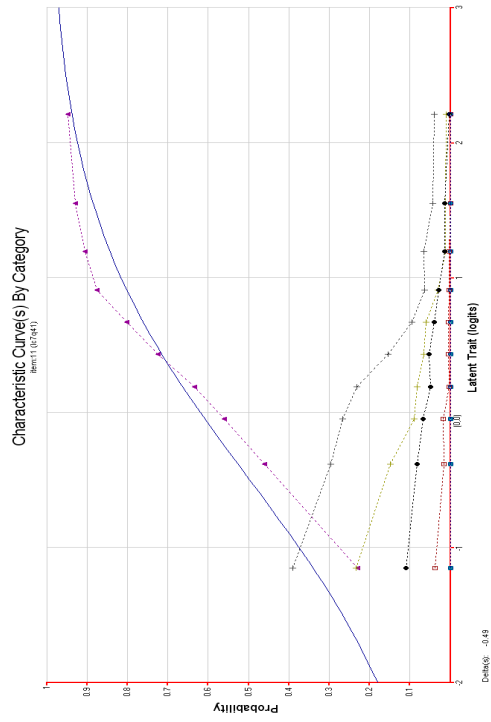
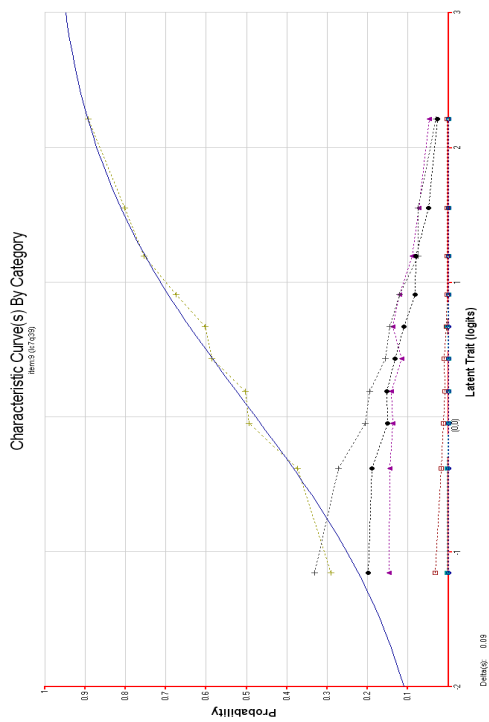
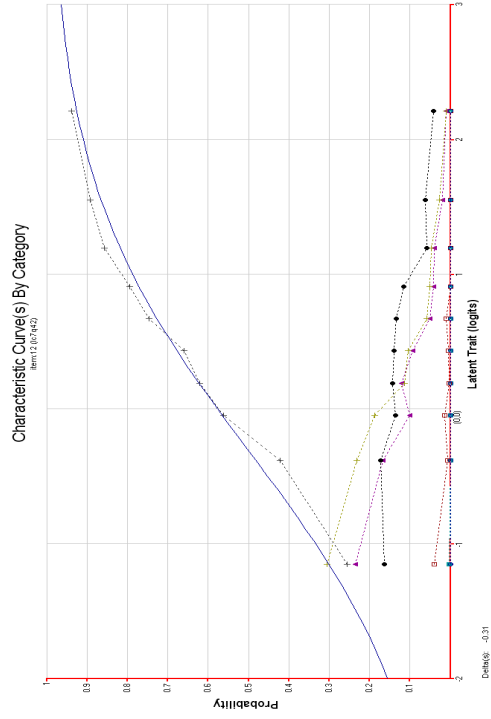
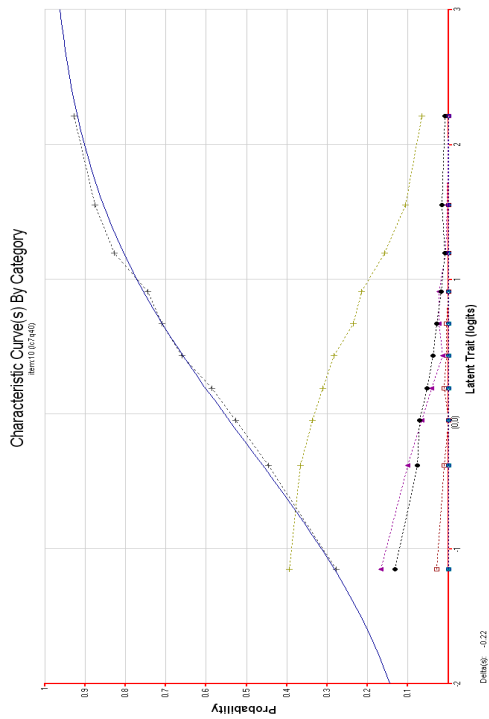


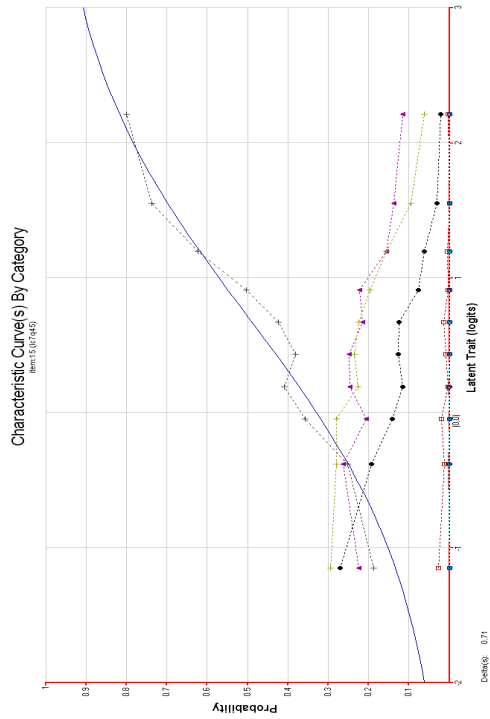
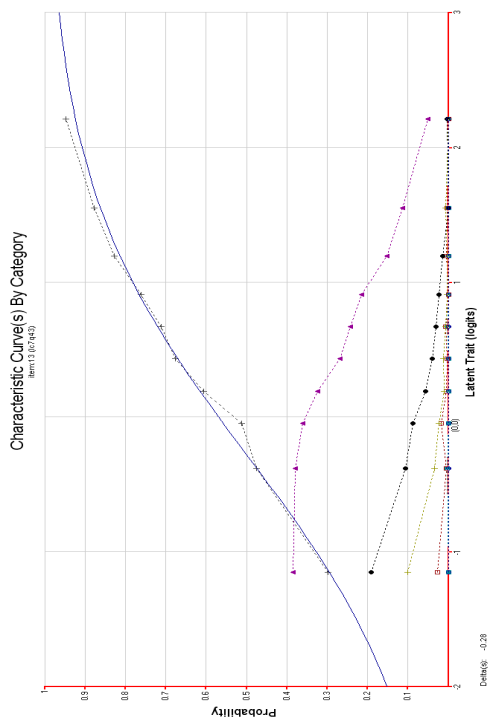
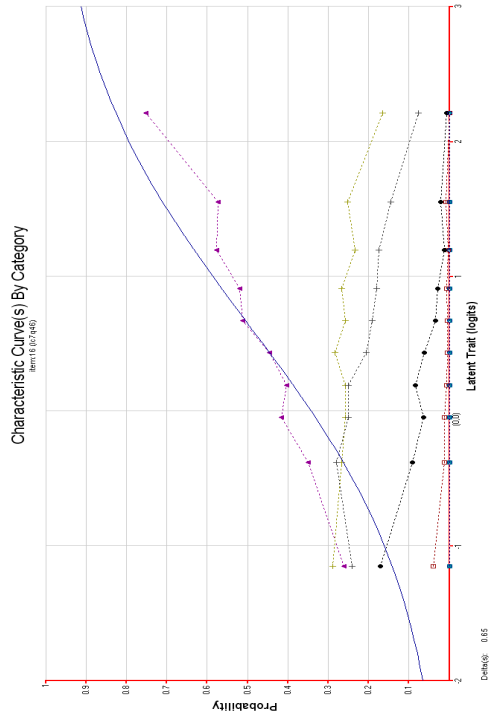
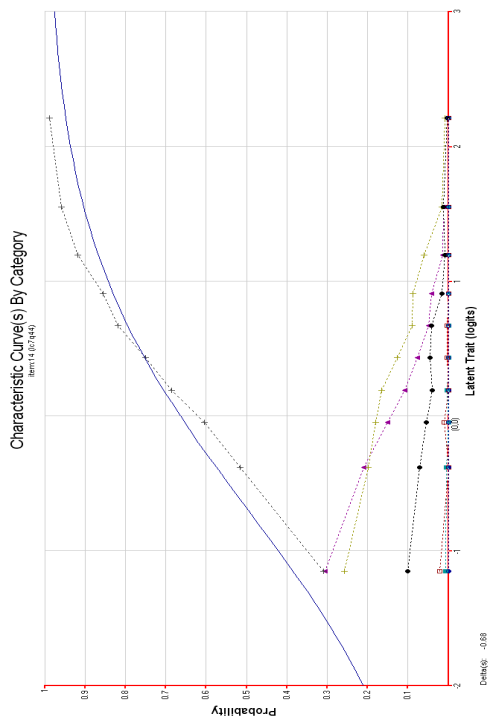


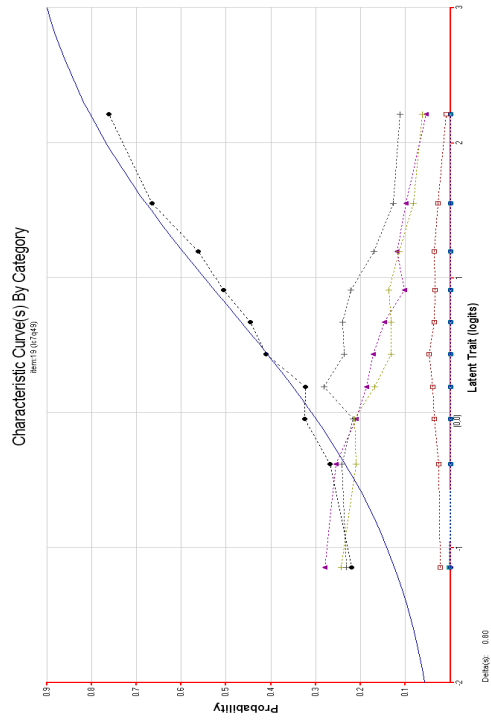
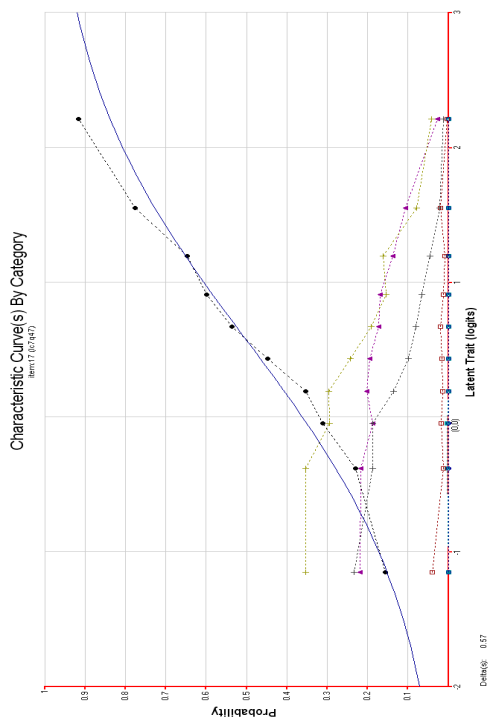
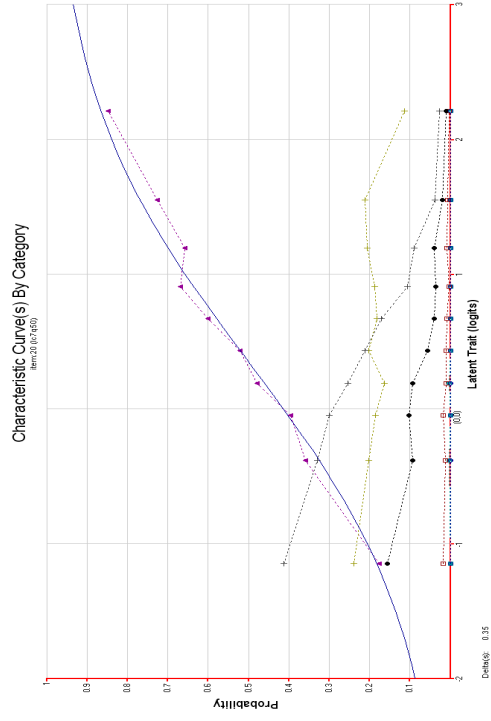
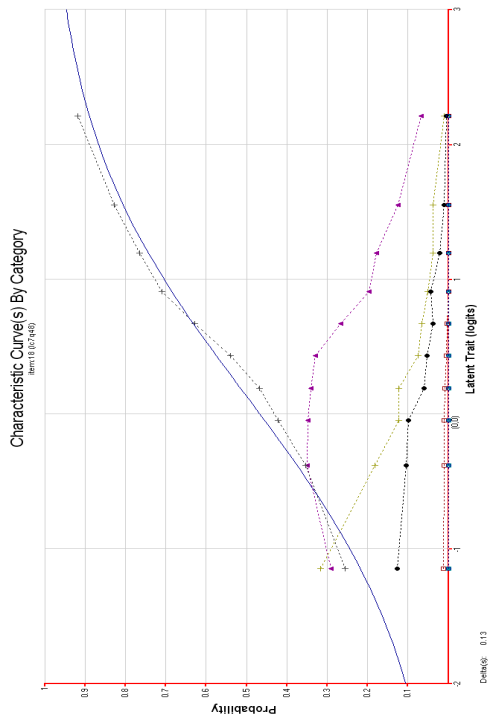
Year 7 Grammar and Punctuation

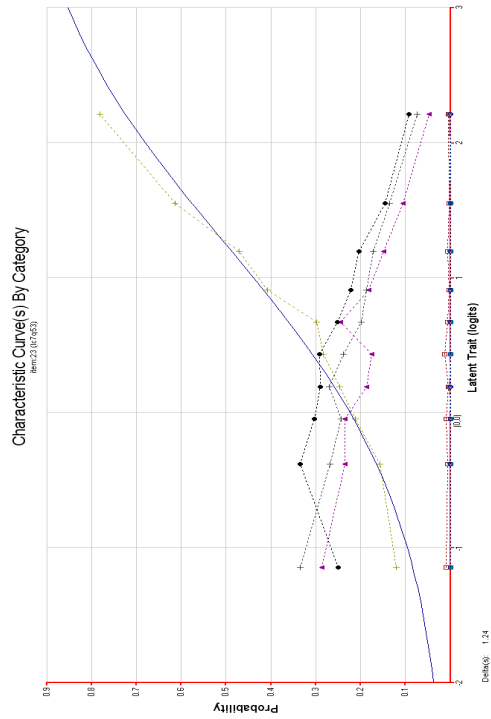
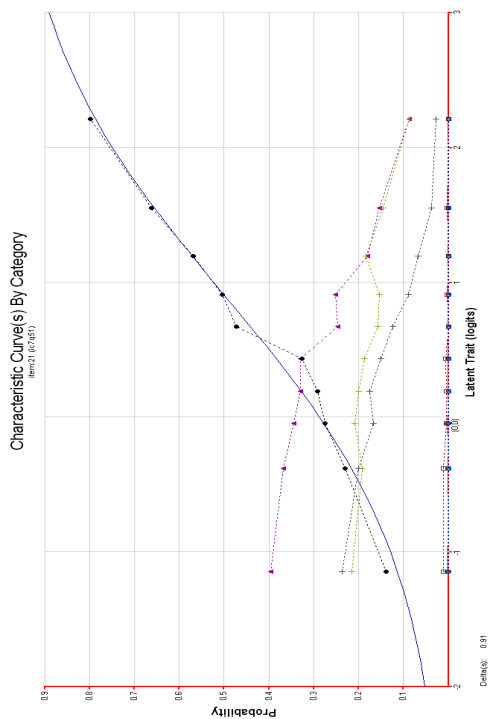
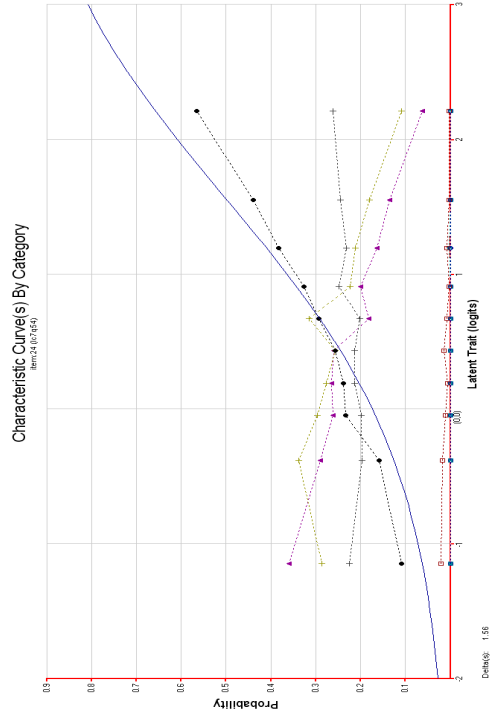
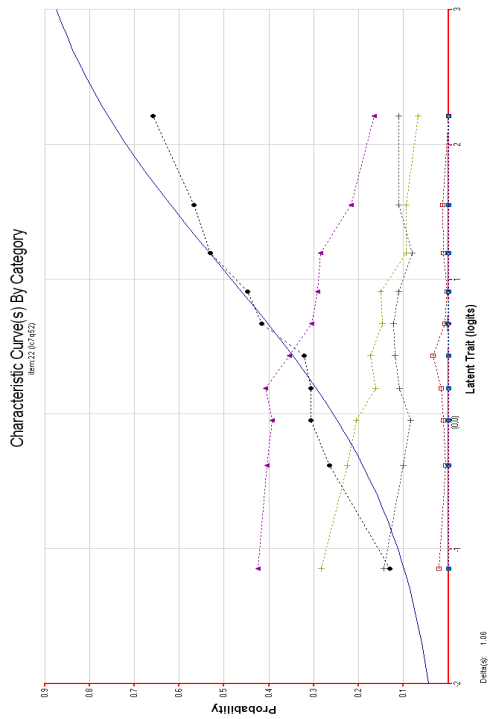


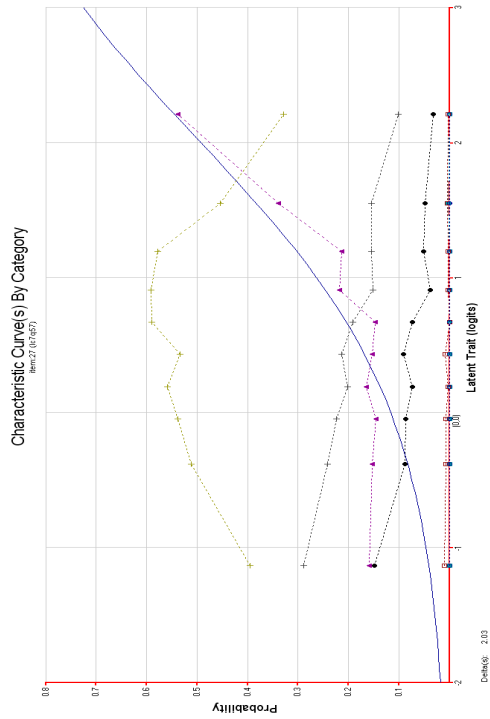
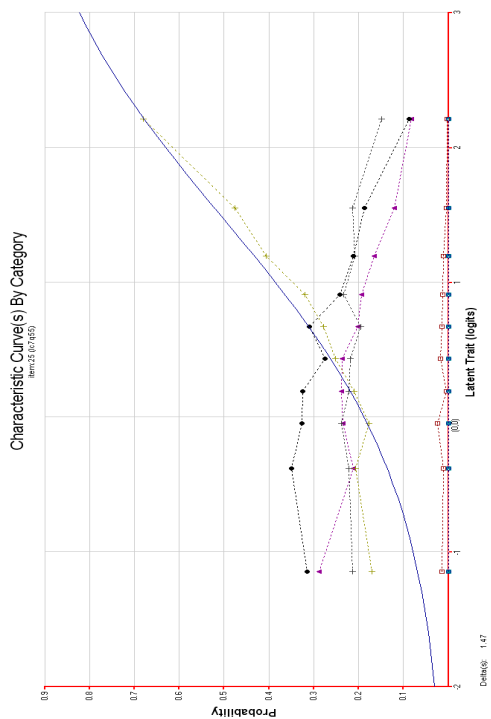
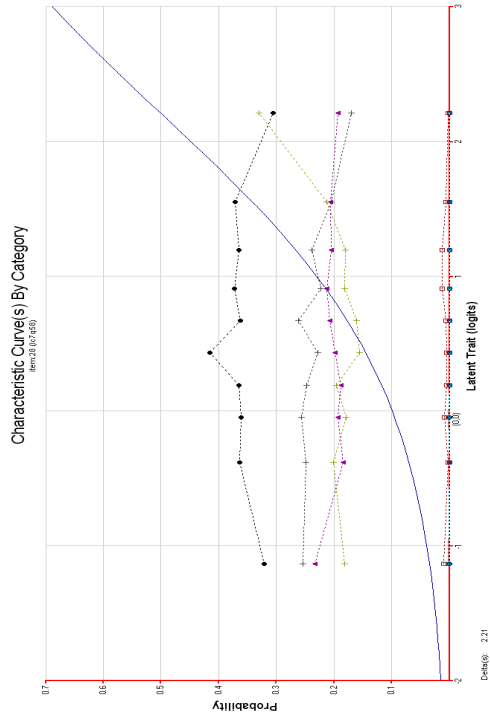
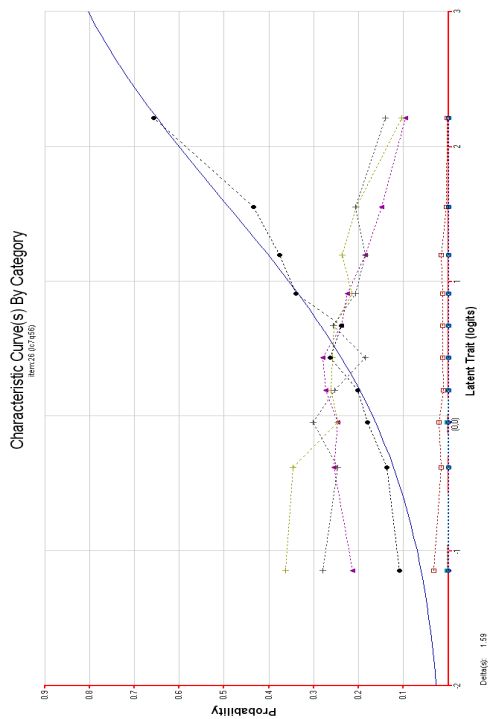




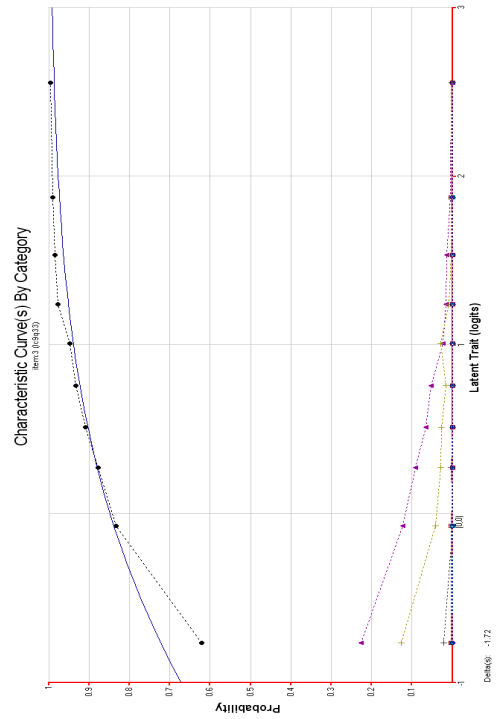
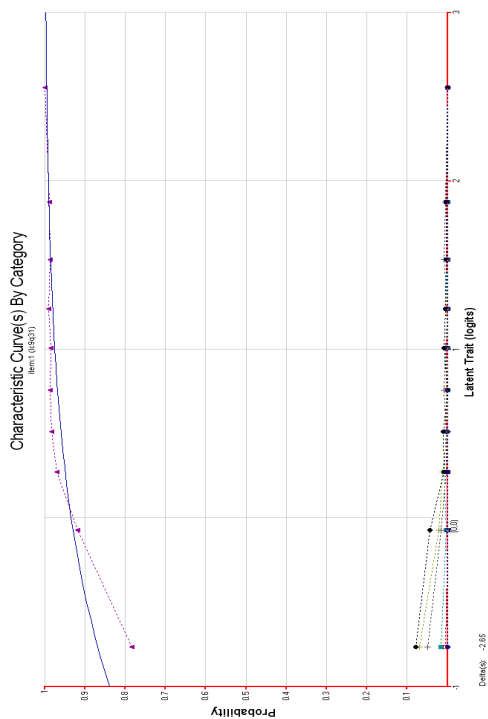
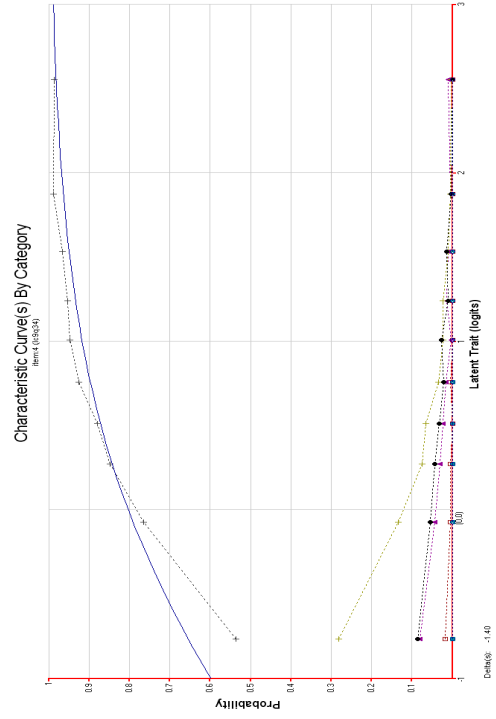
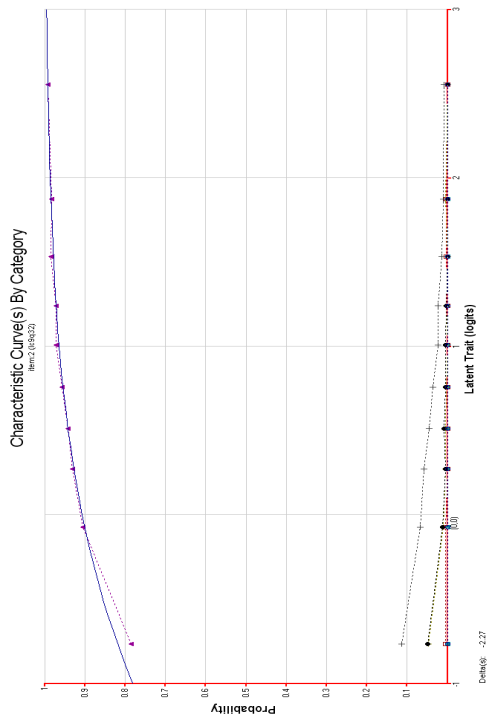


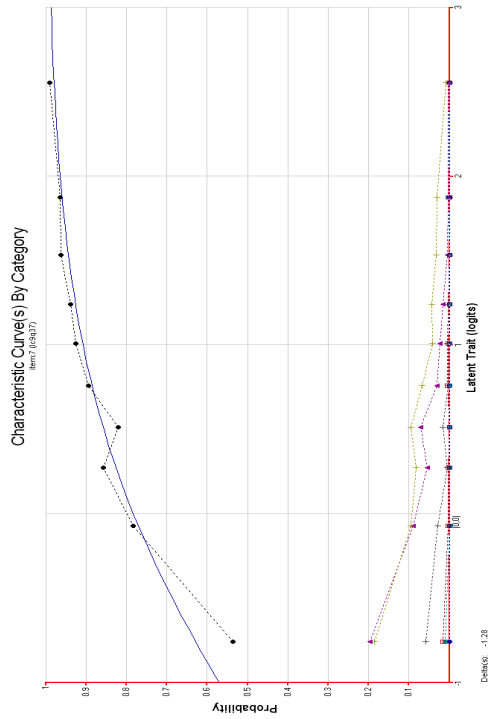
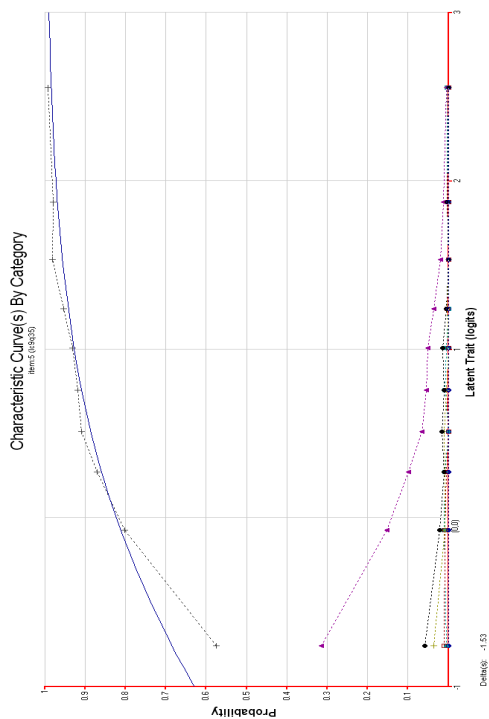
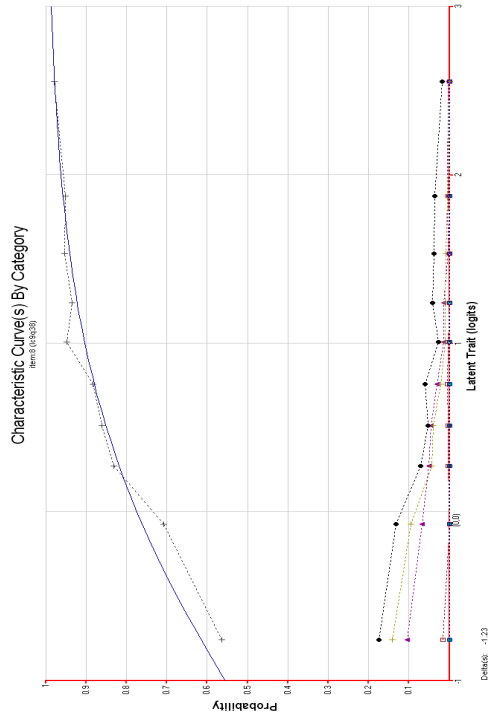
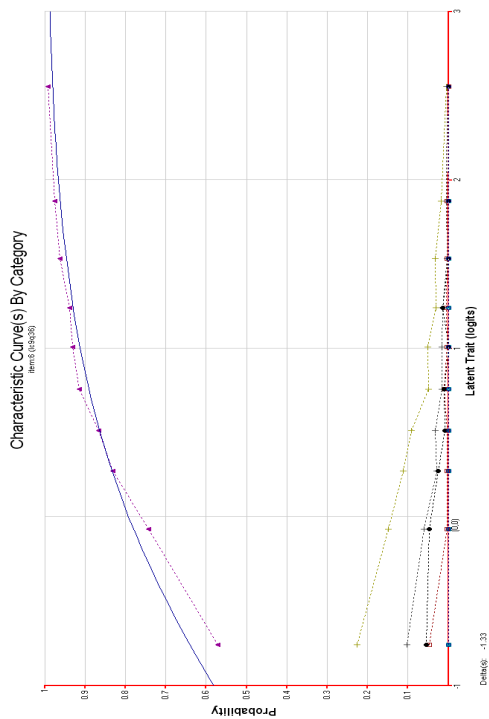


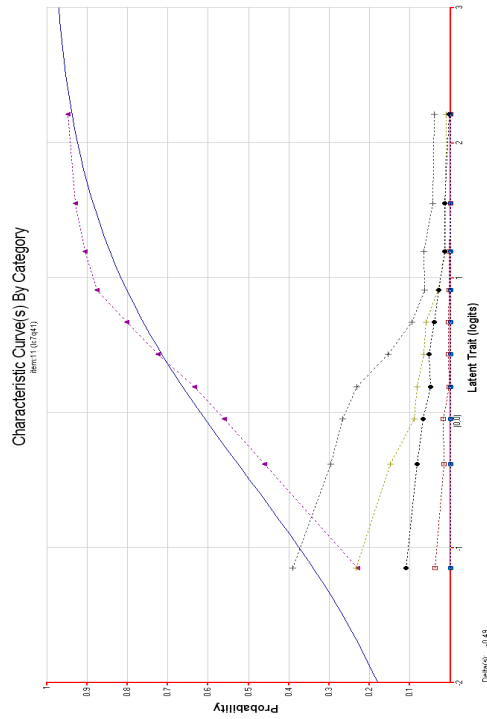
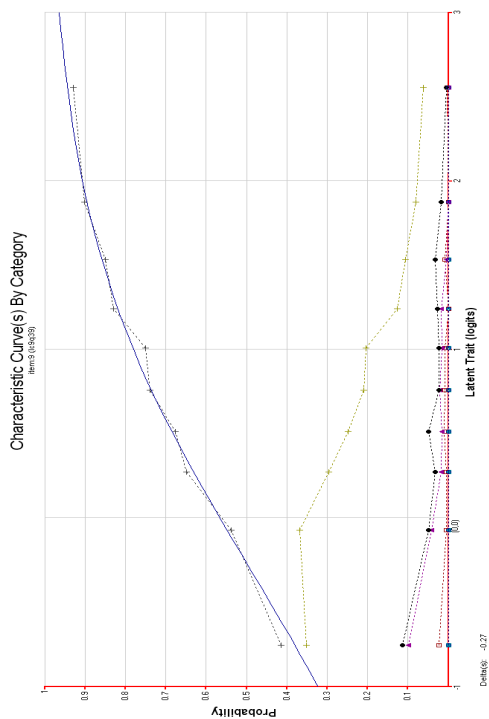
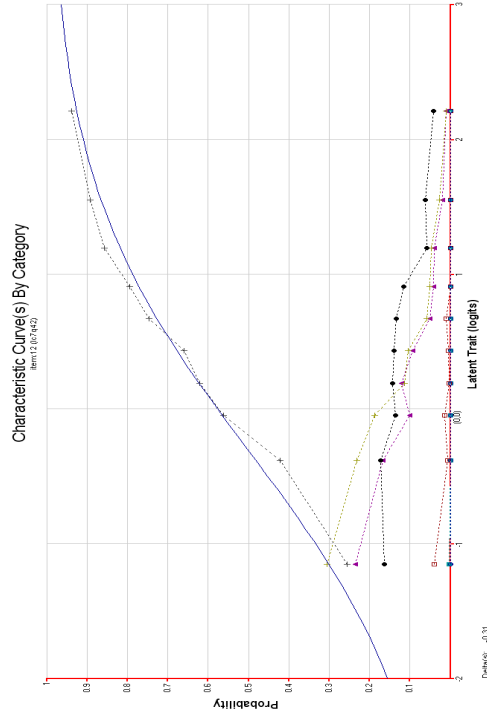
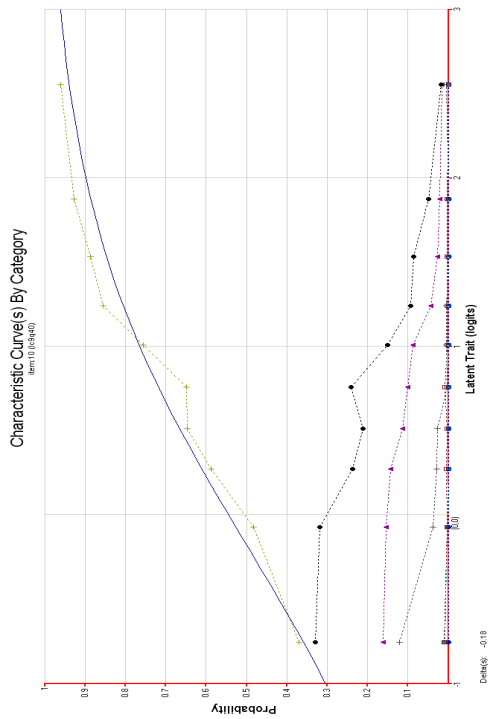


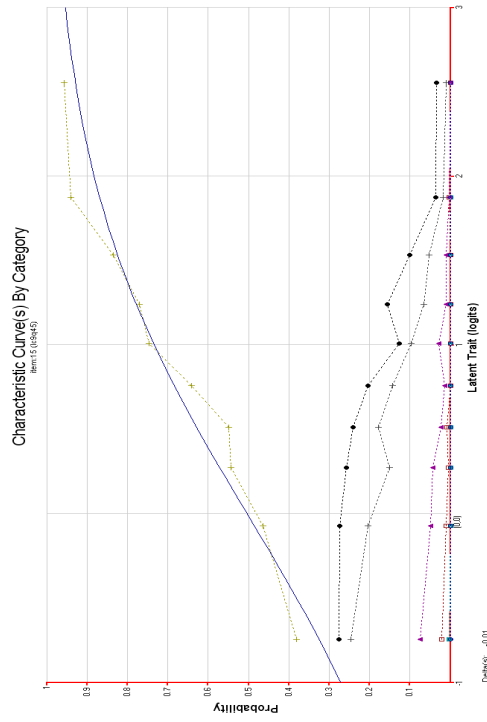
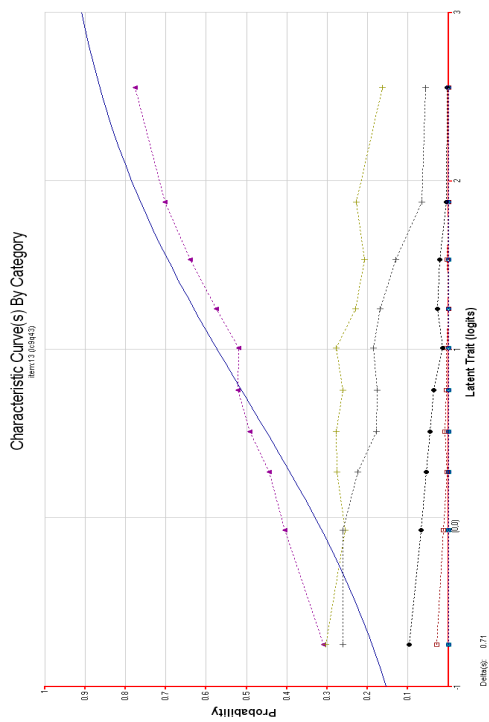
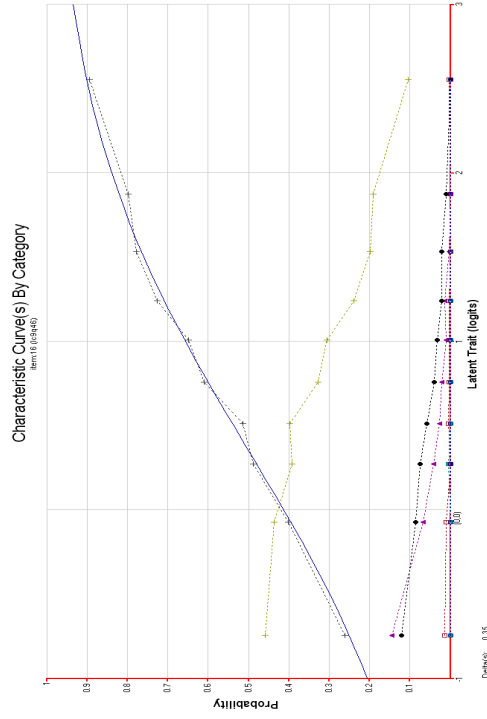
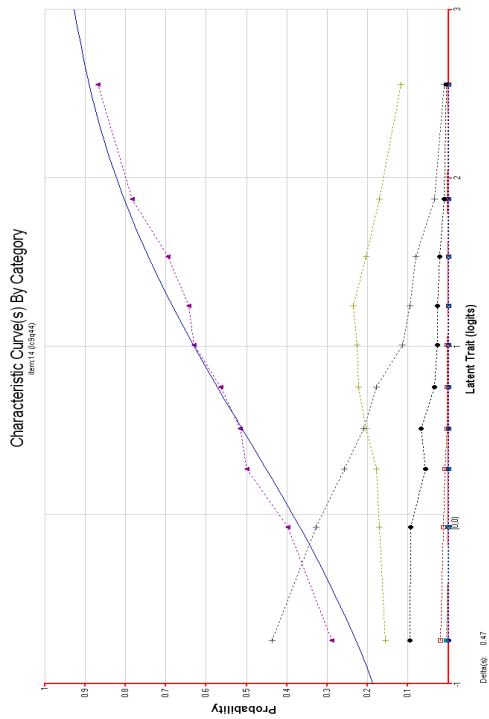


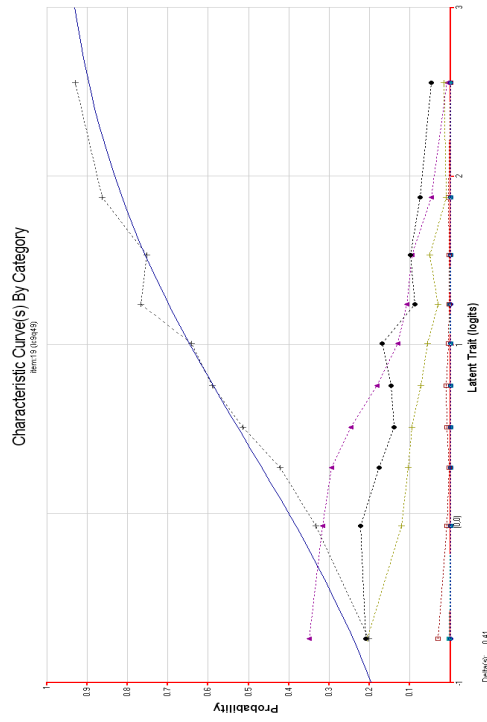
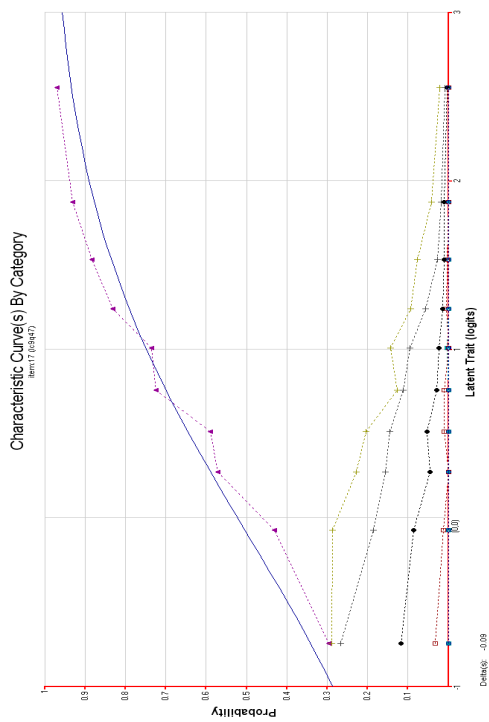
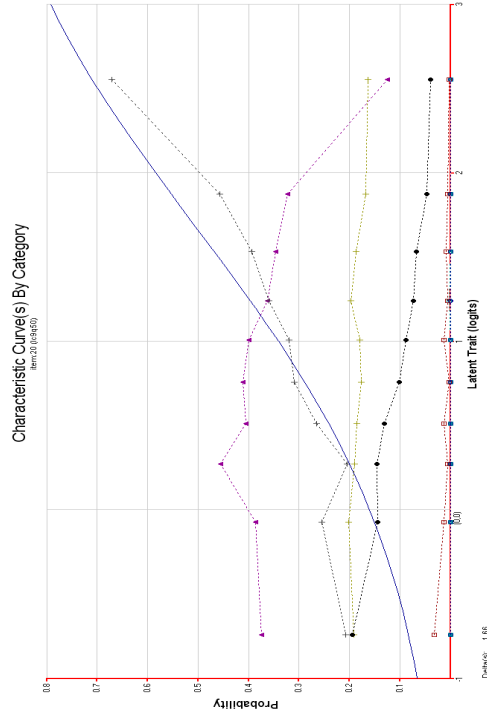
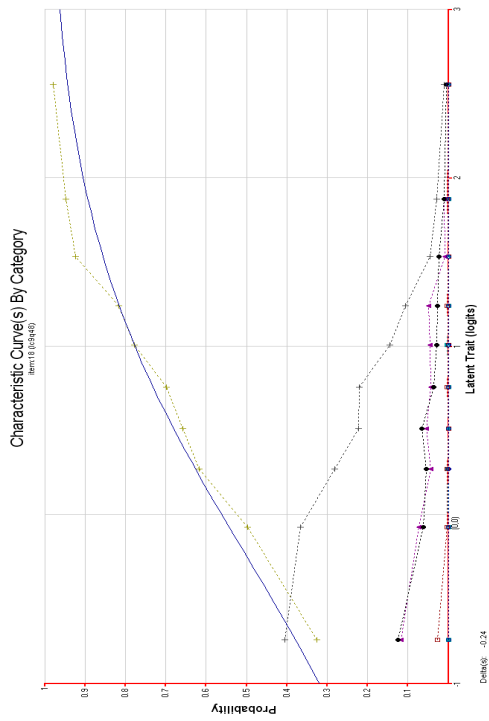
Year 9 Grammar and Punctuation

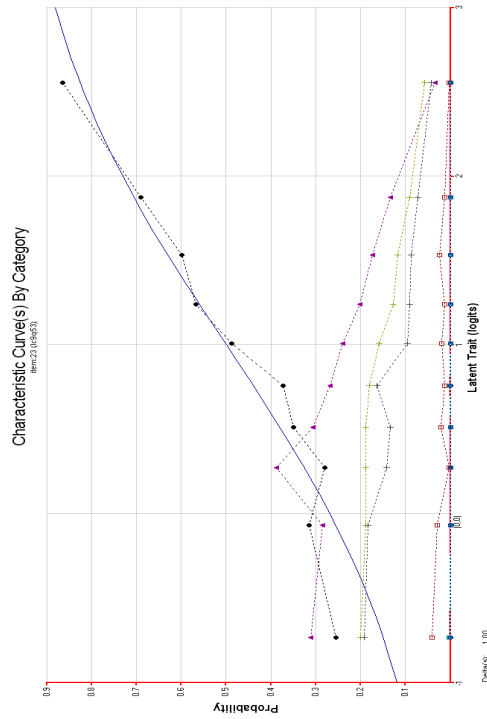
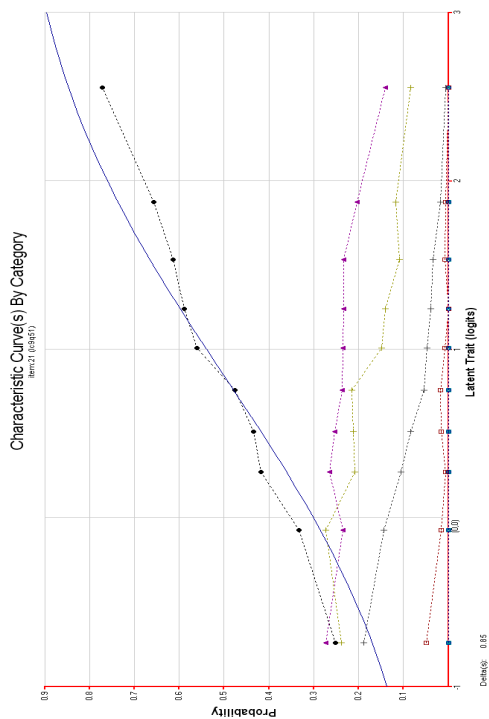
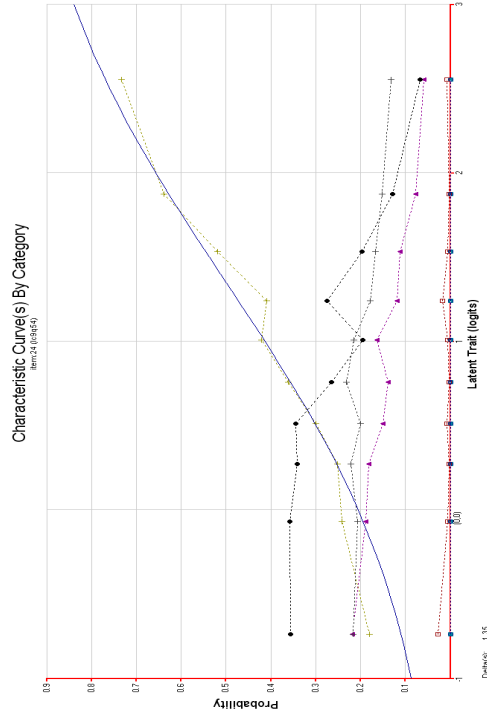
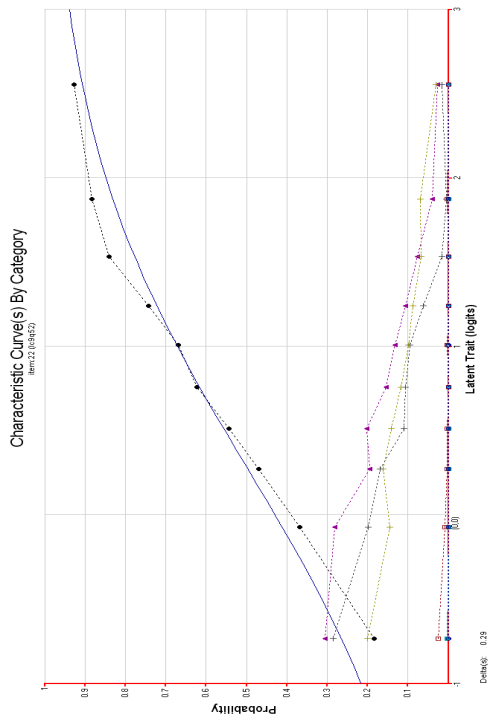


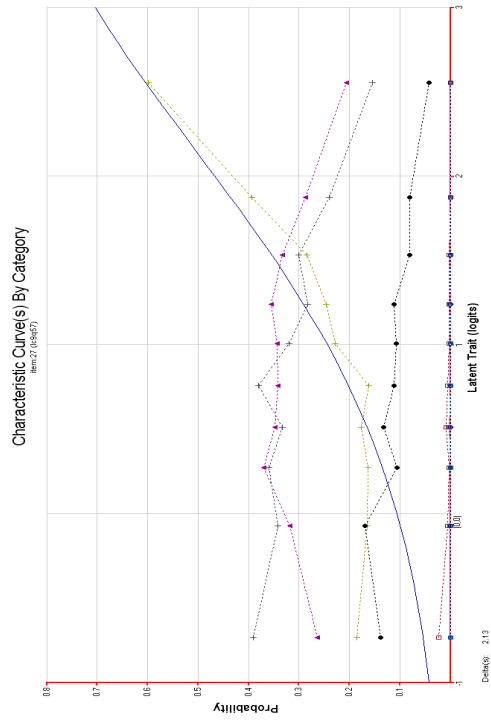
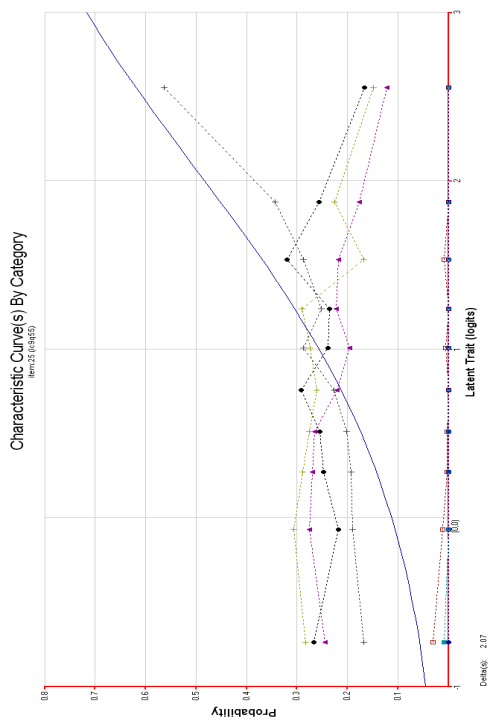
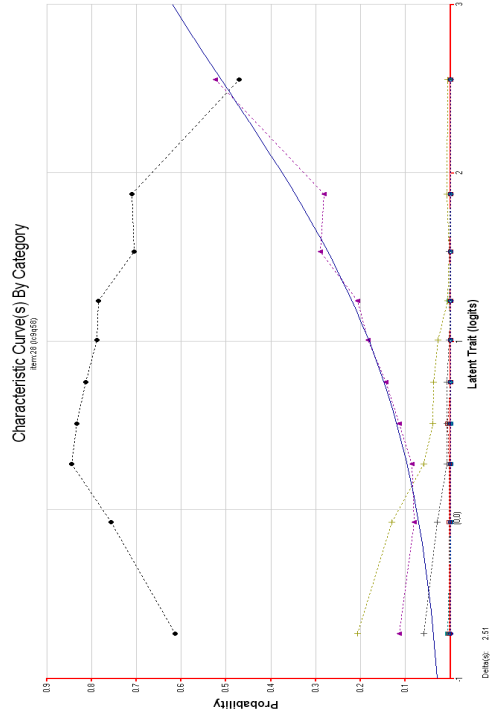
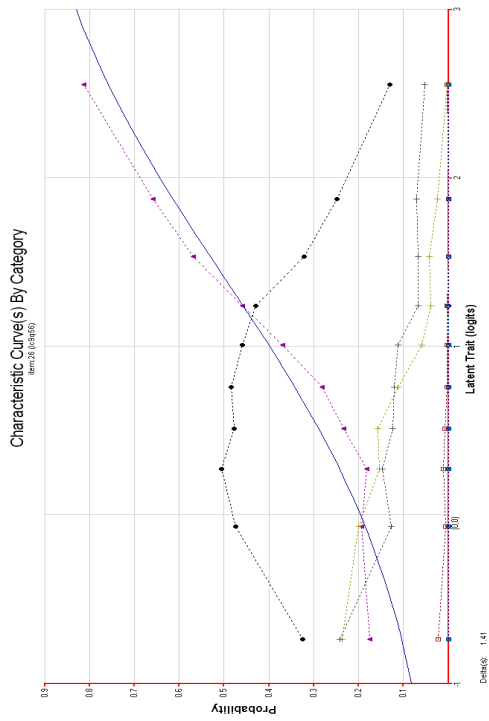




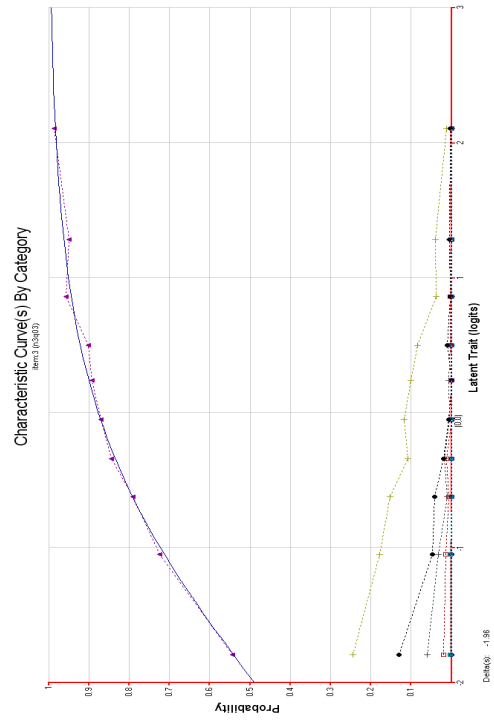
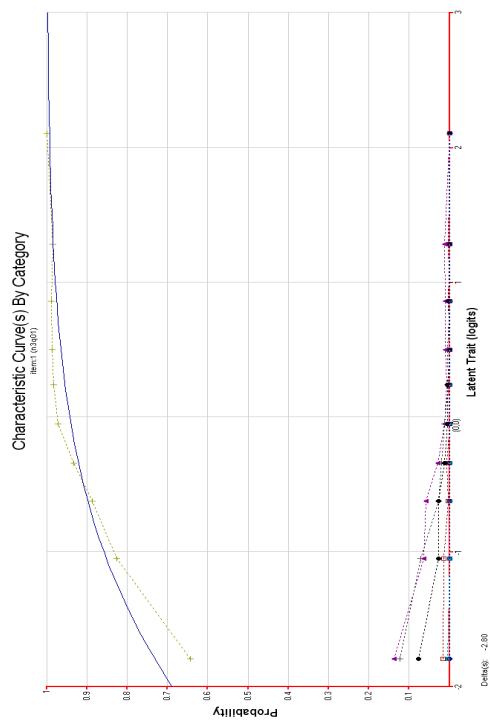
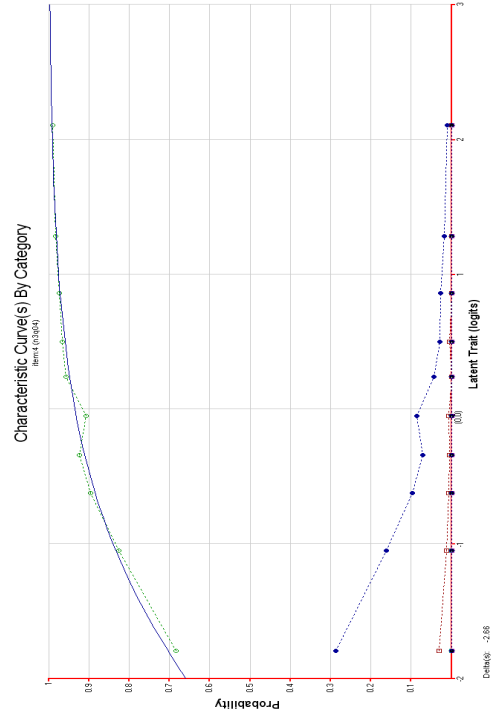
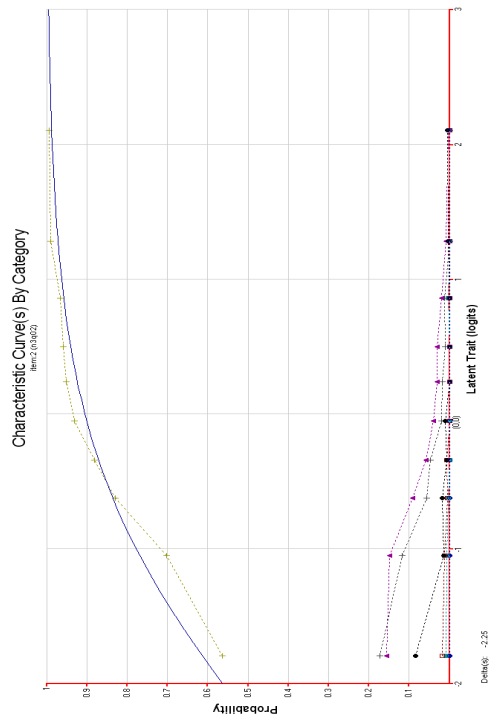


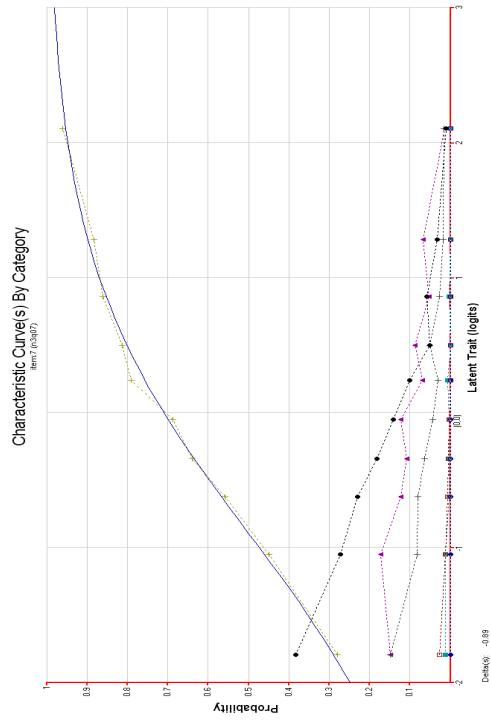
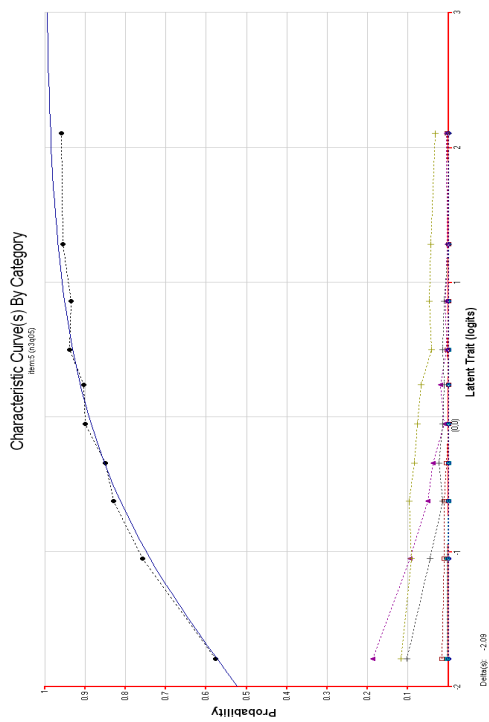
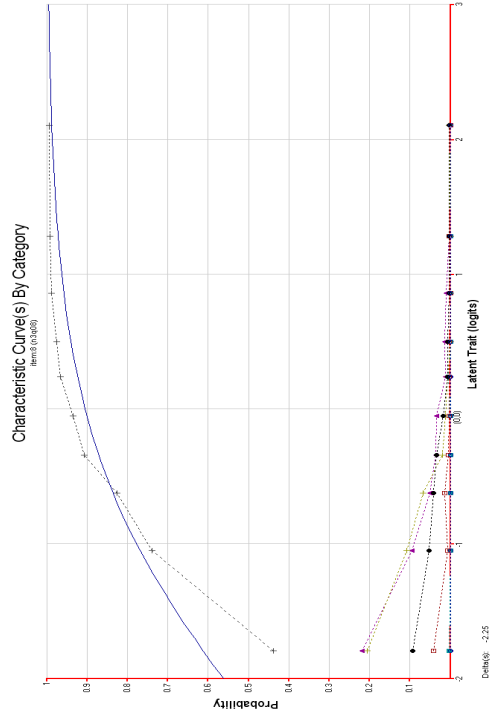
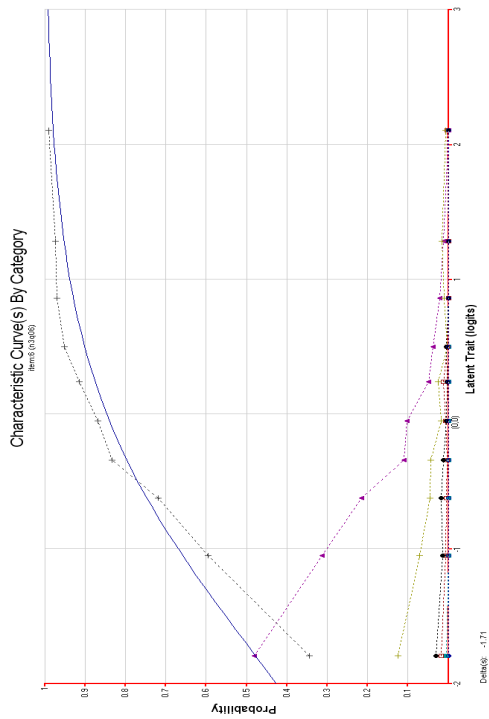


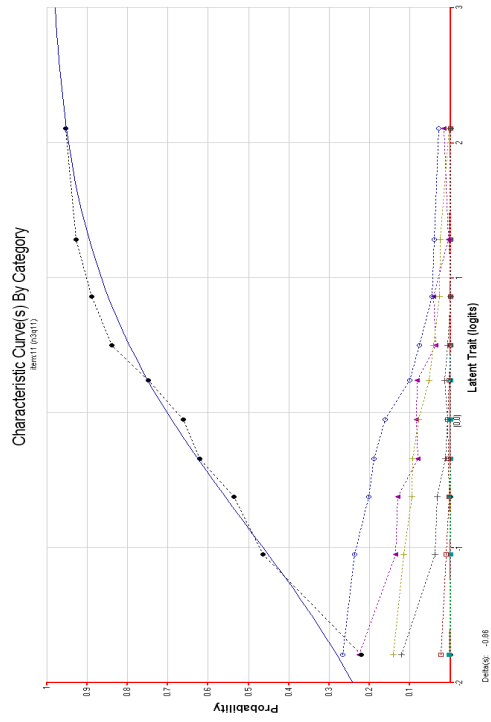
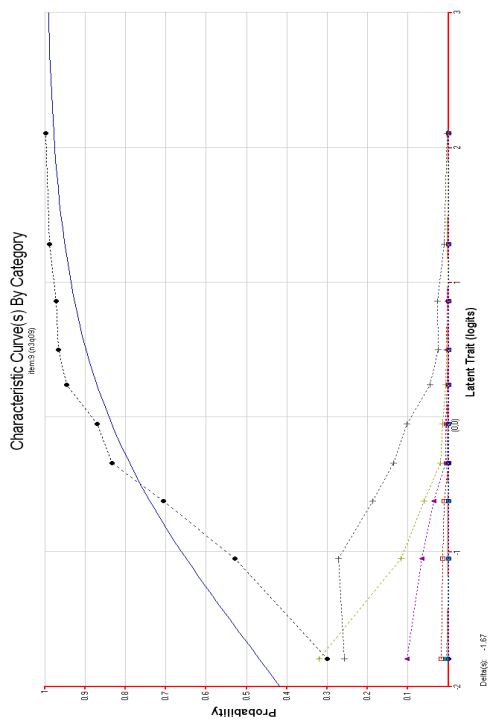
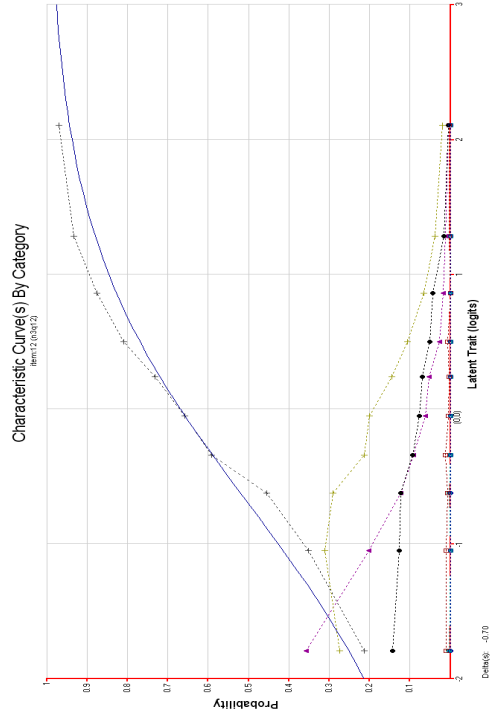
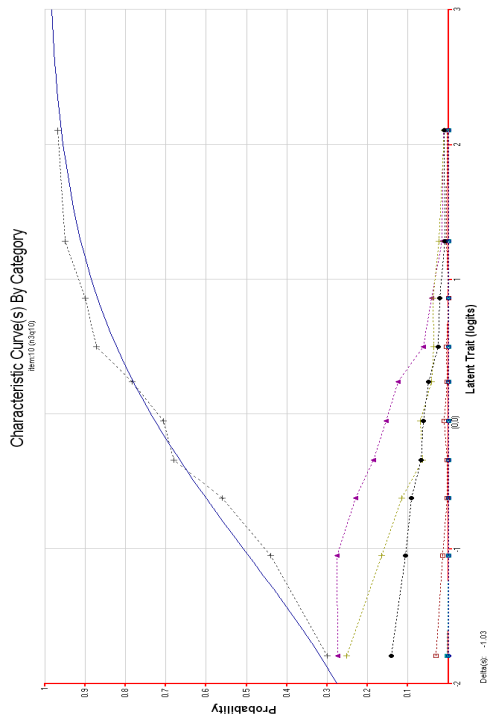


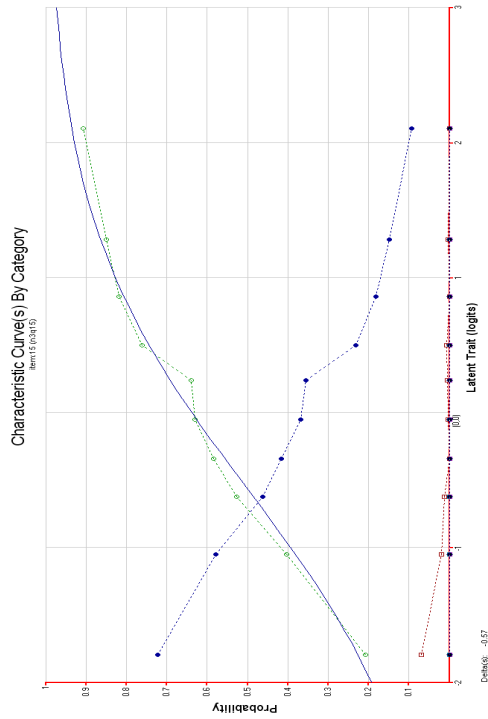
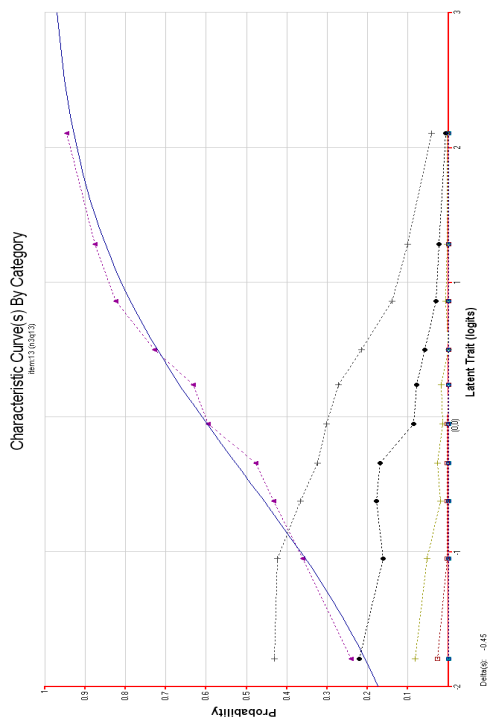
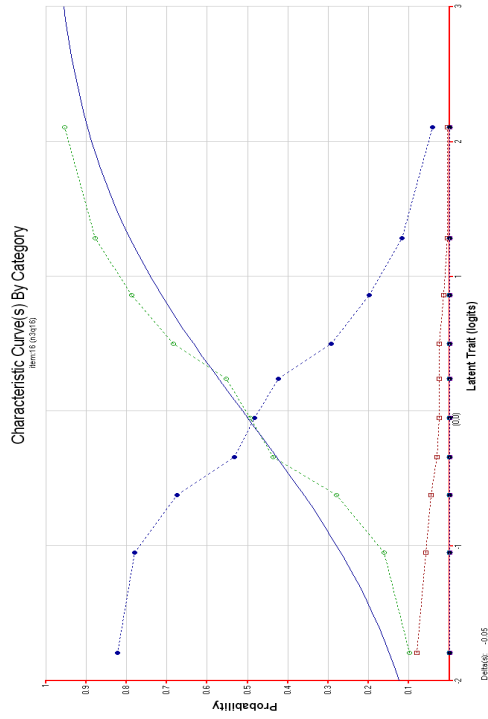
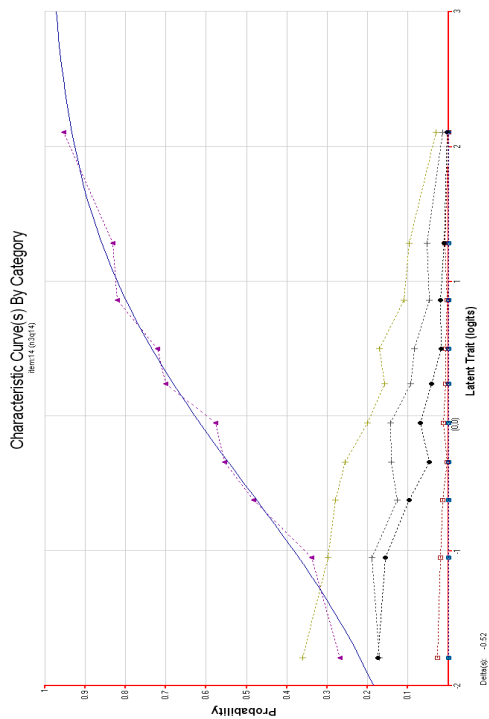


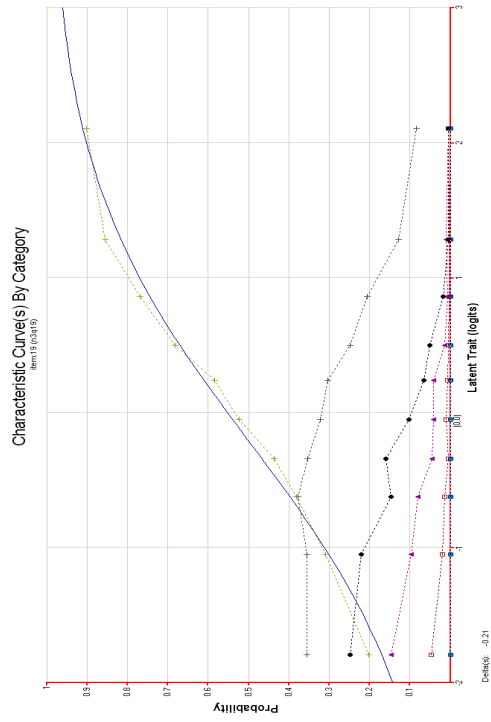
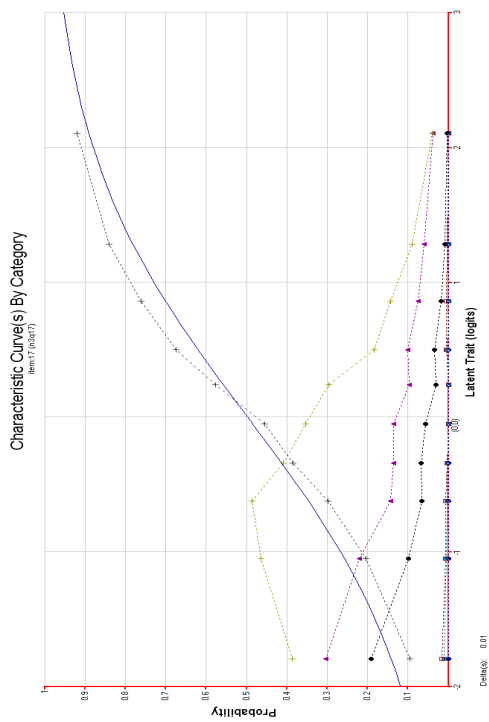
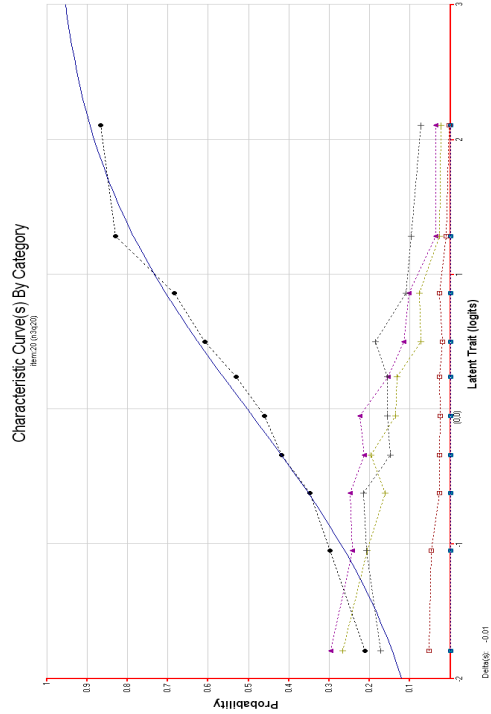
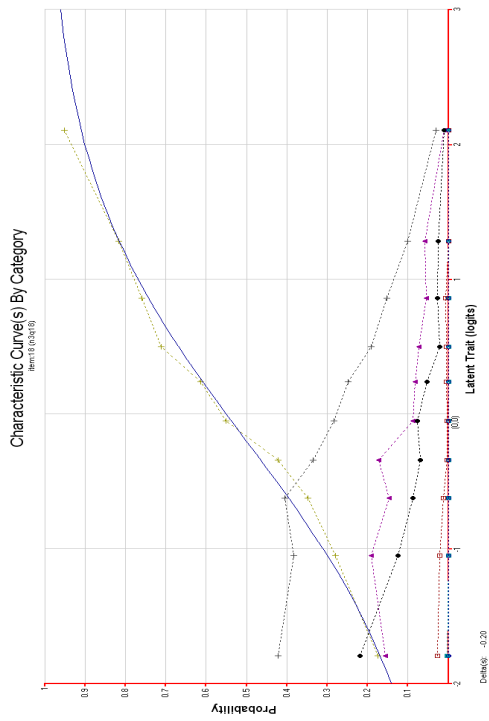
Year 3 Numeracy

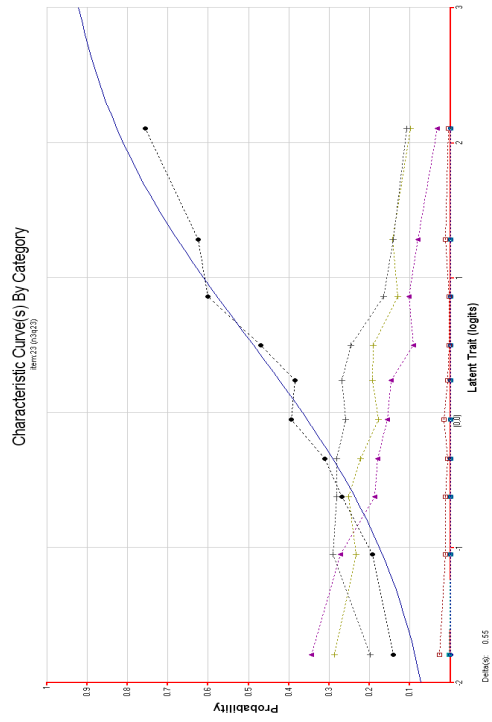
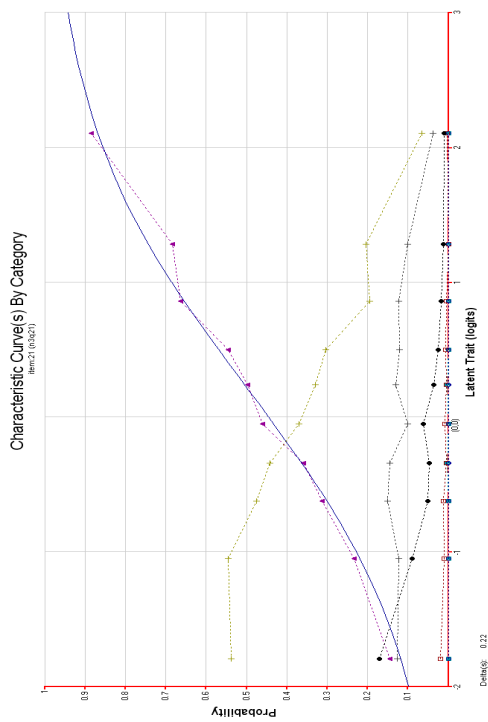
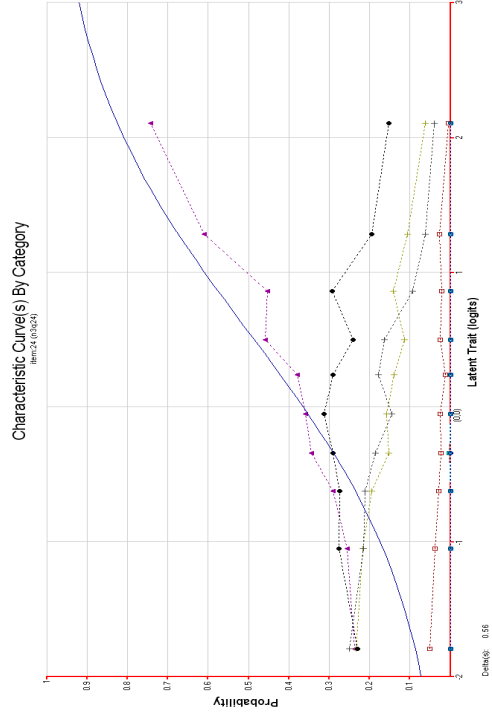
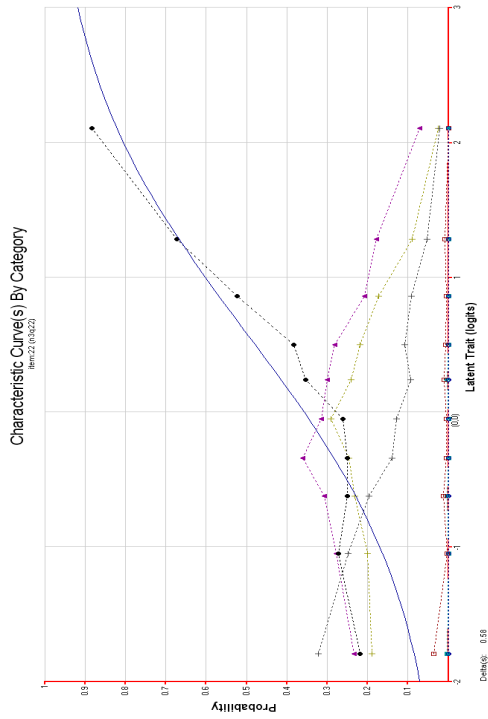


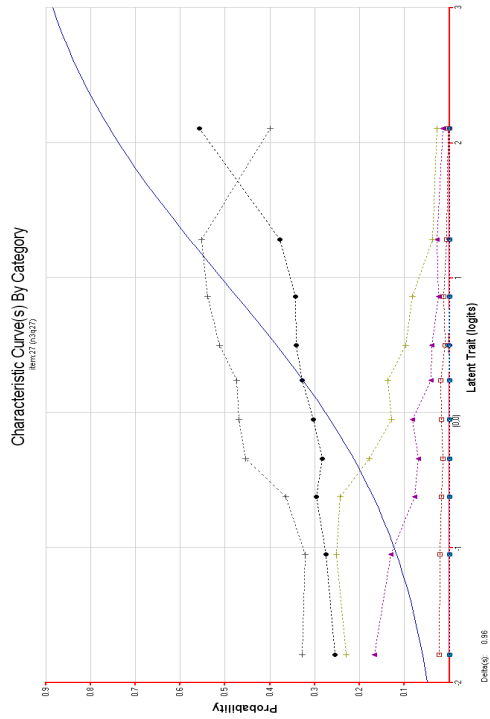
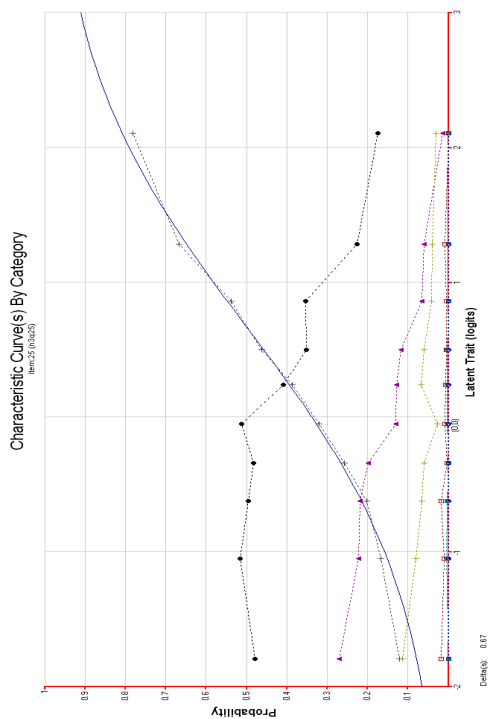
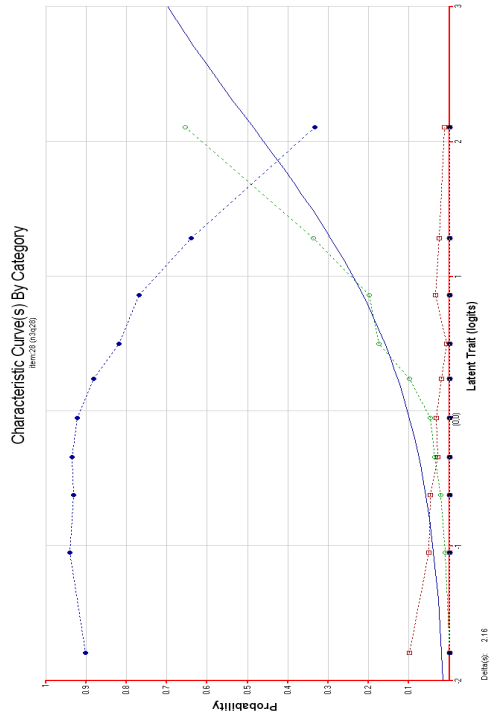
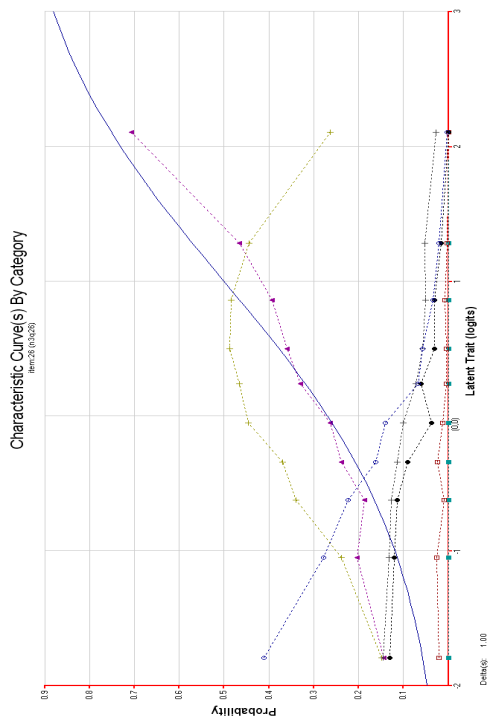


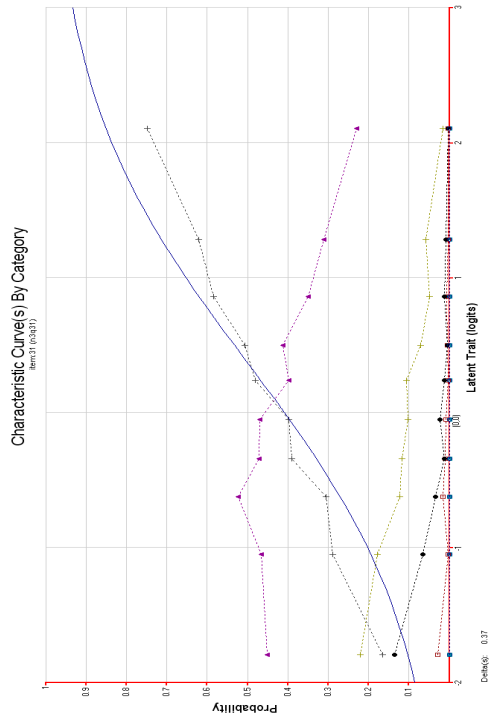
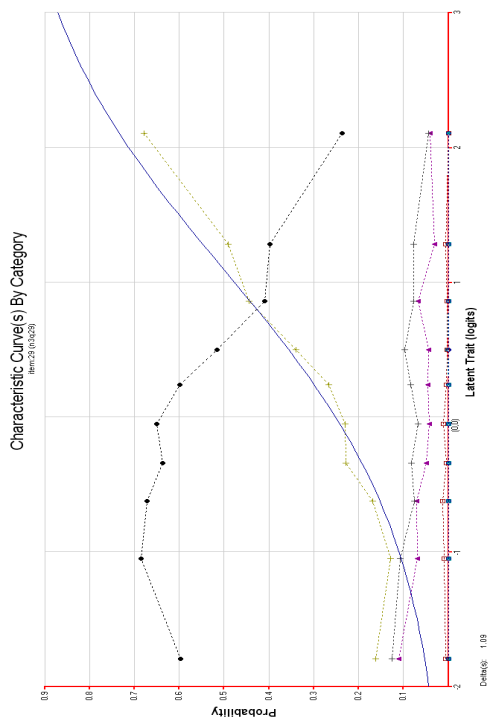
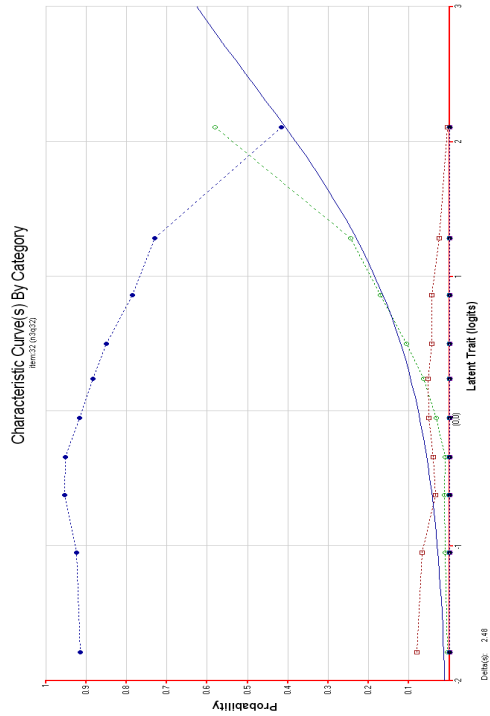
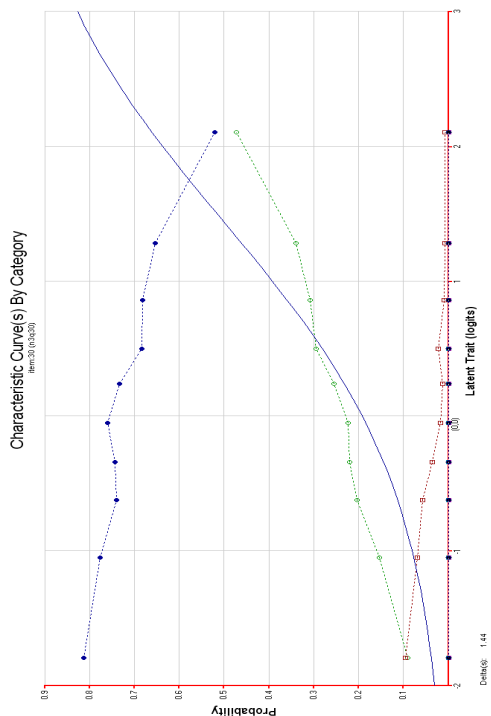


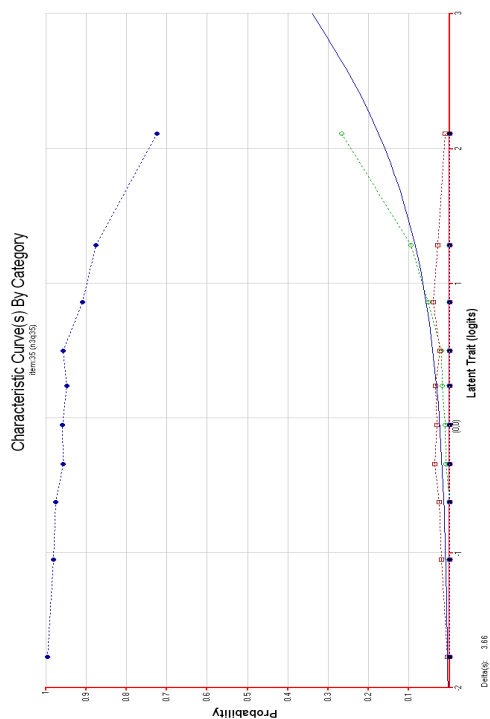
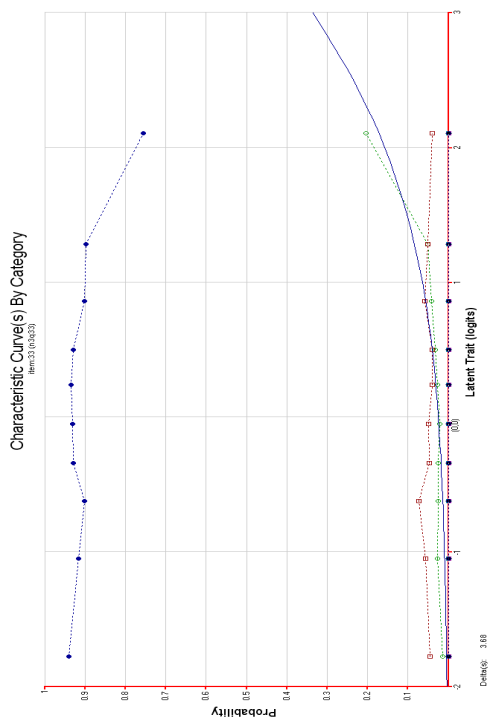
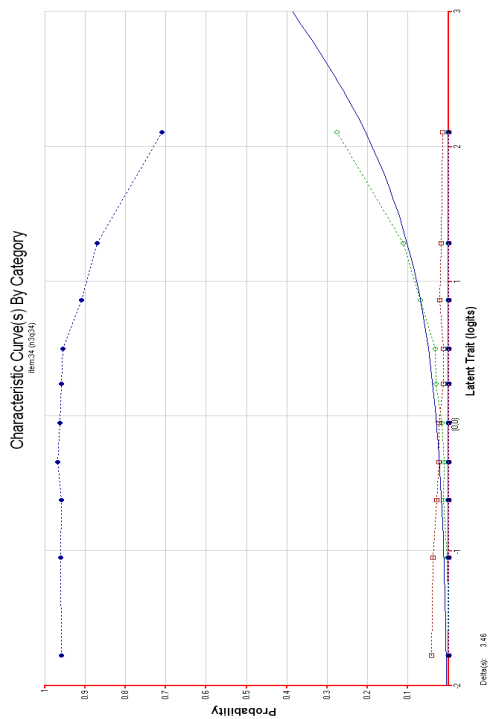




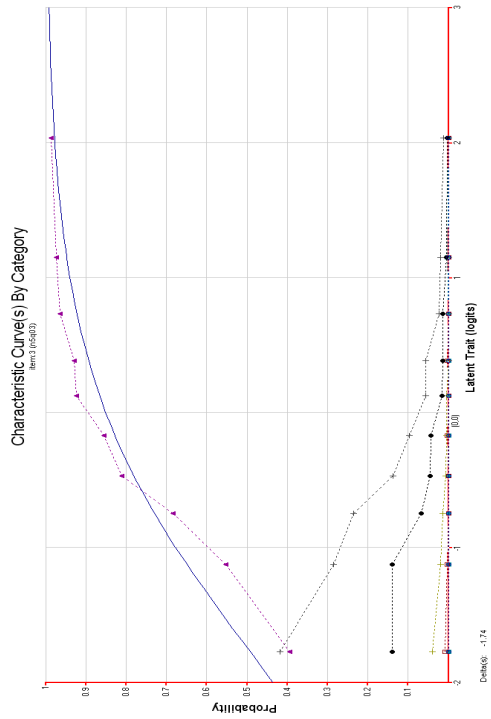
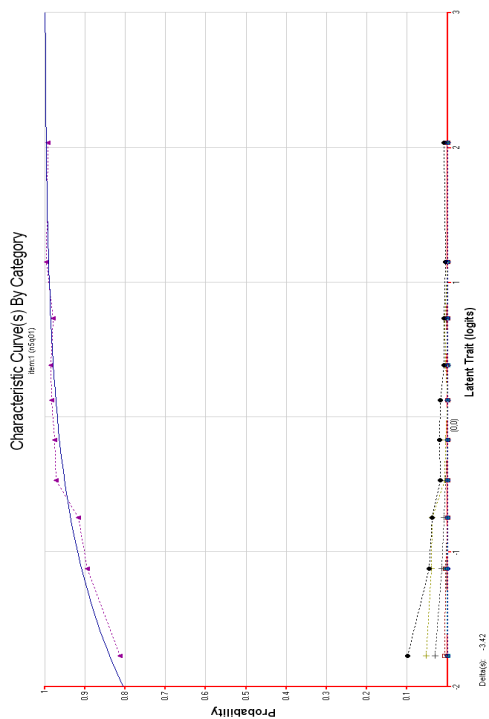
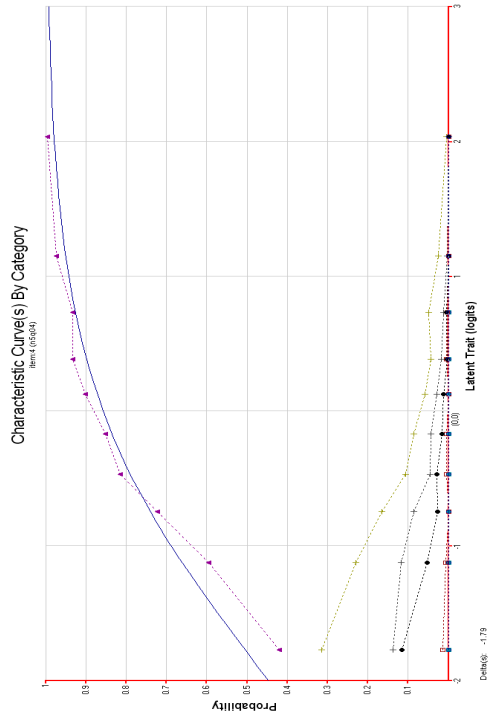
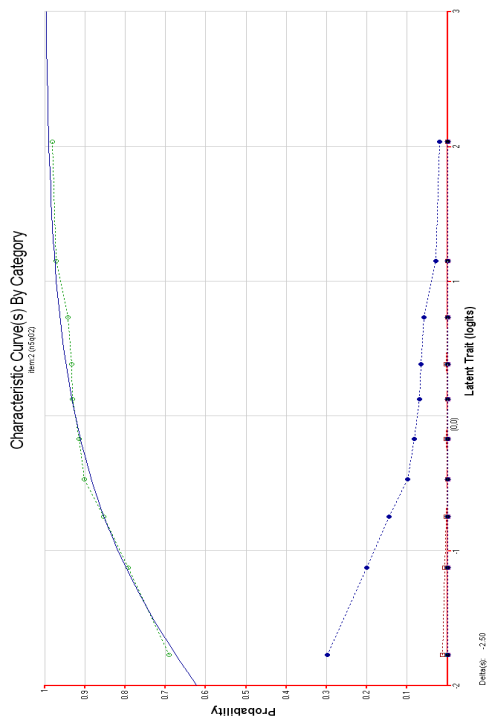


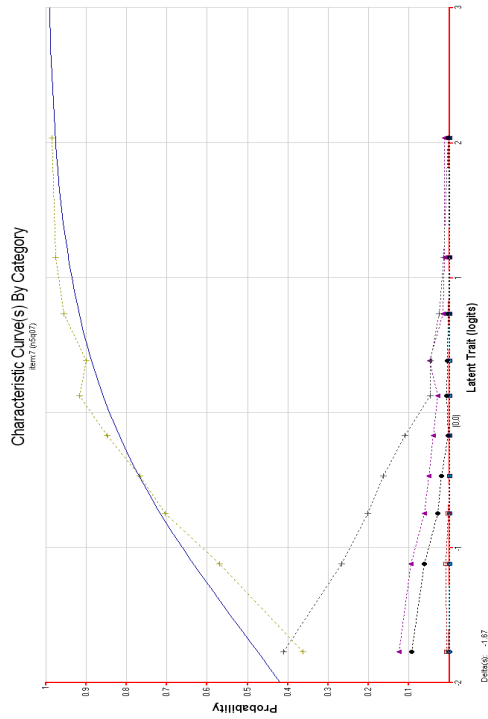
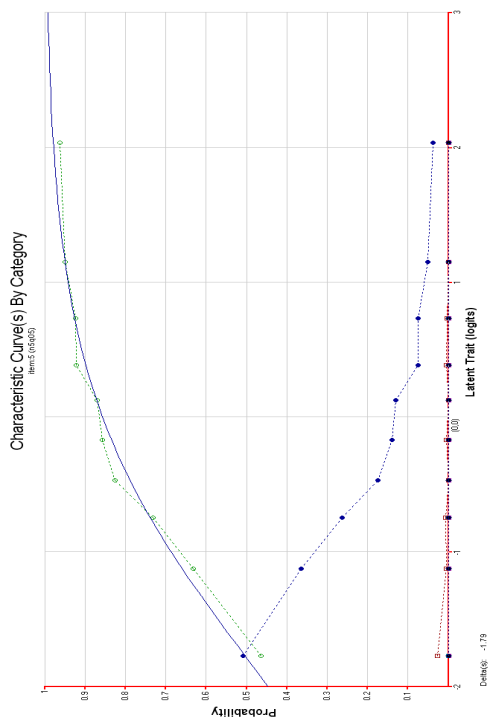
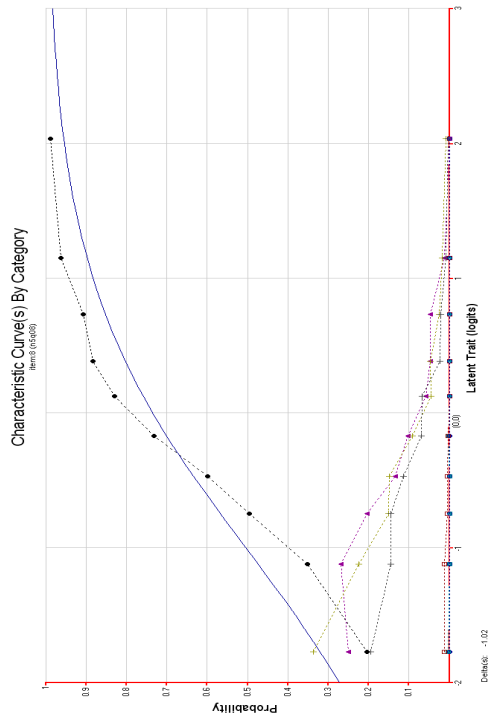
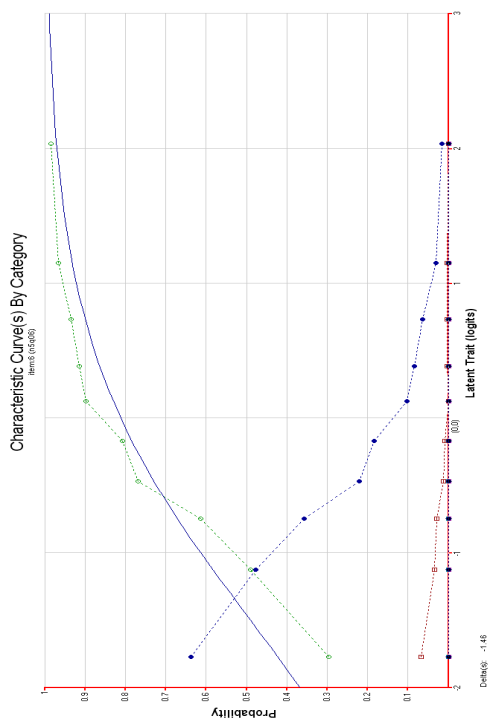


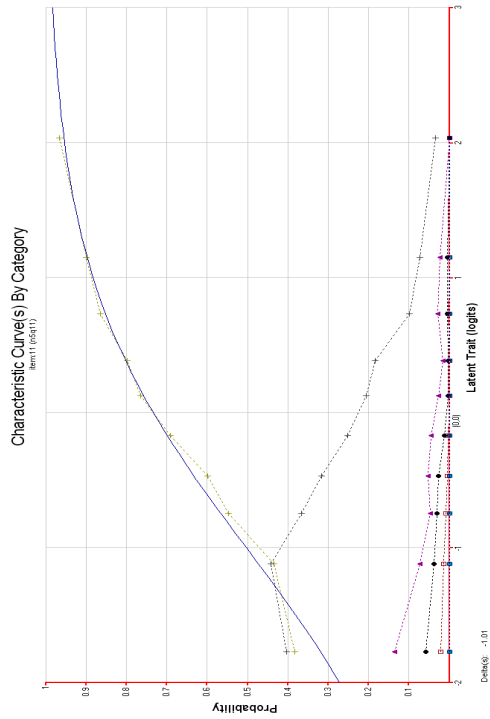
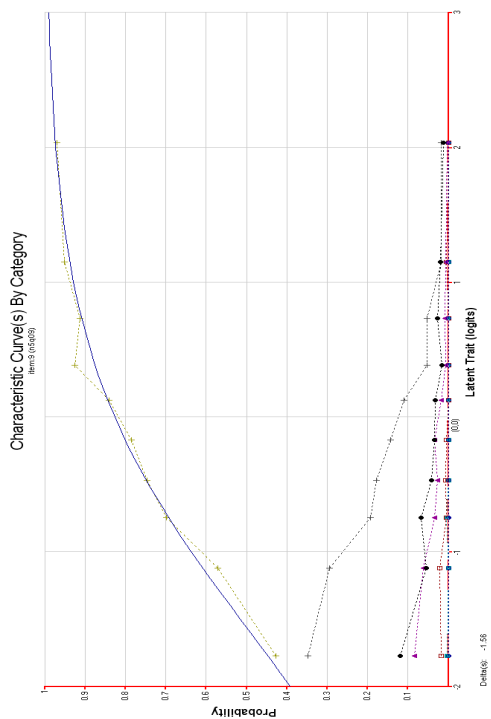
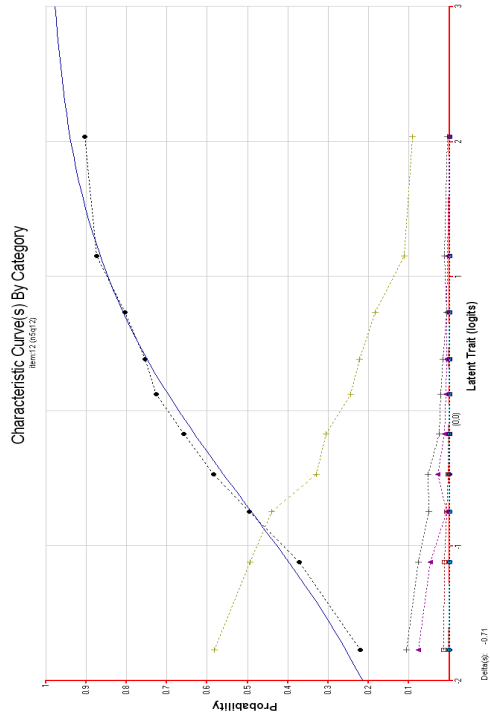
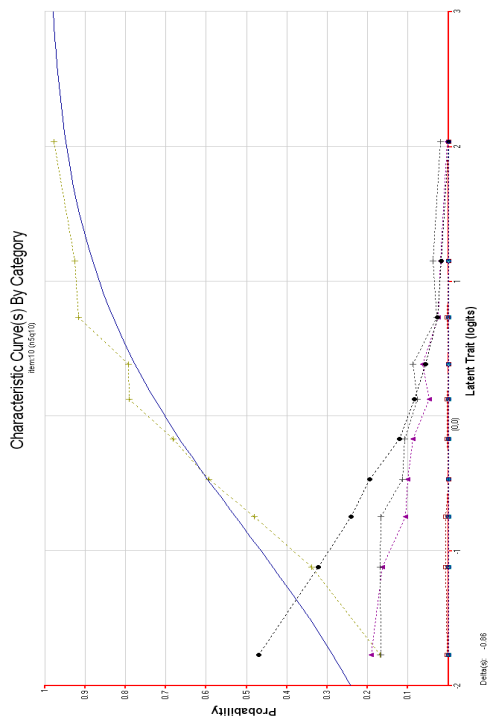


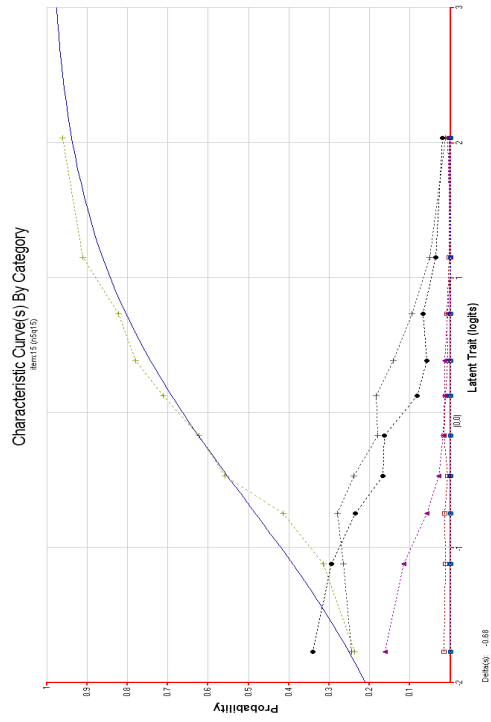
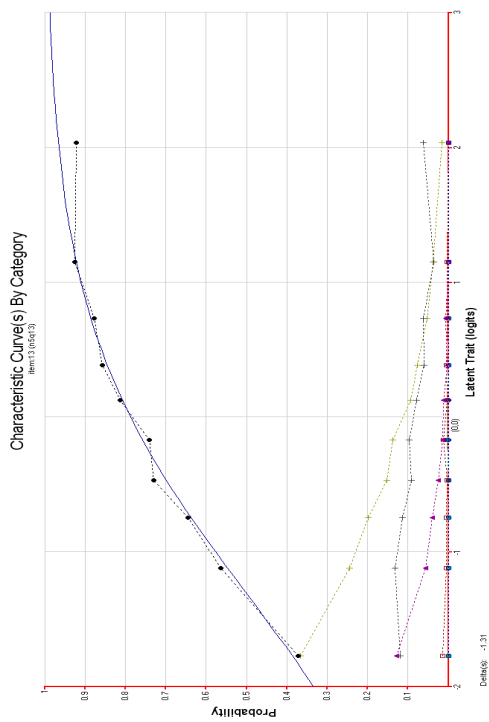
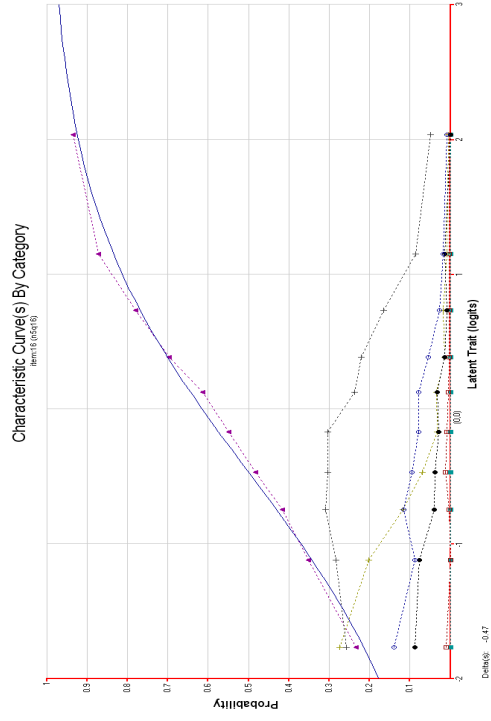
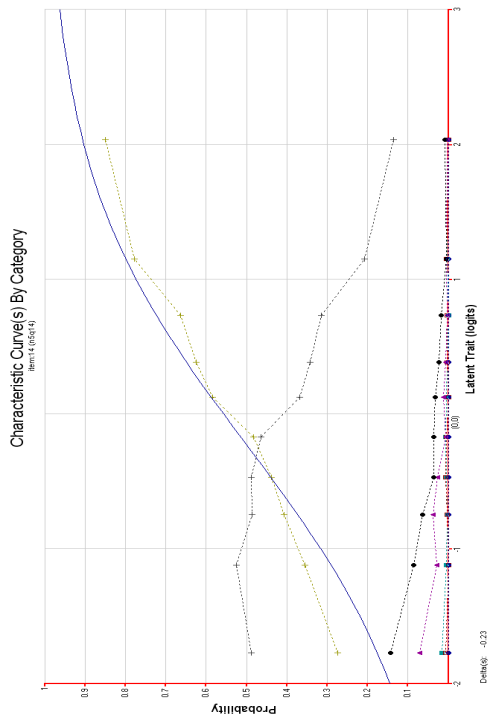


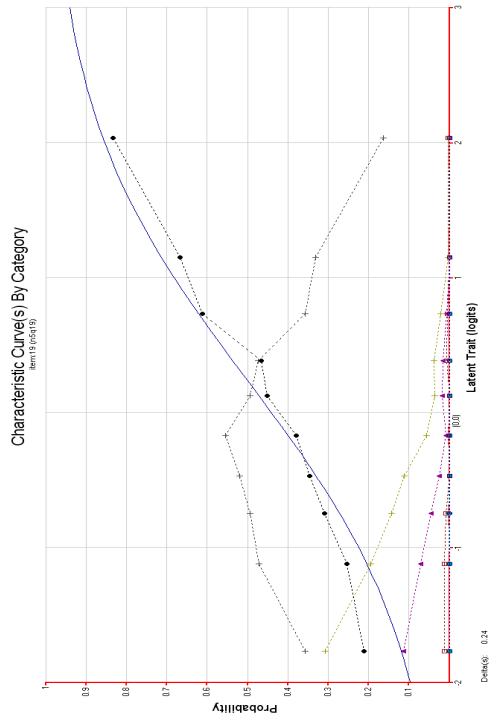
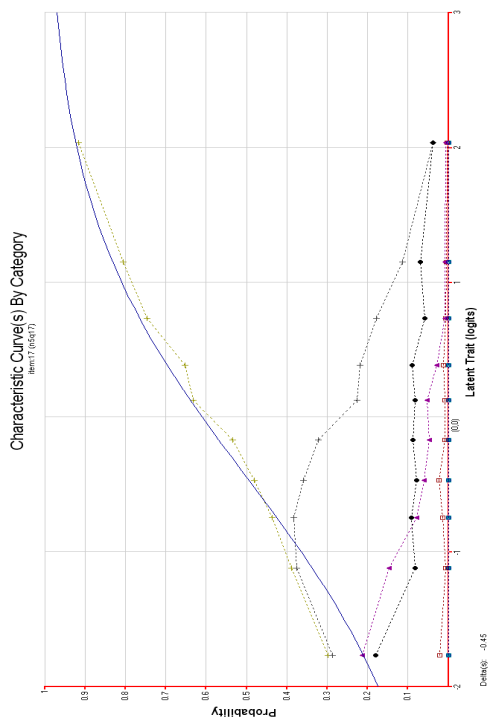
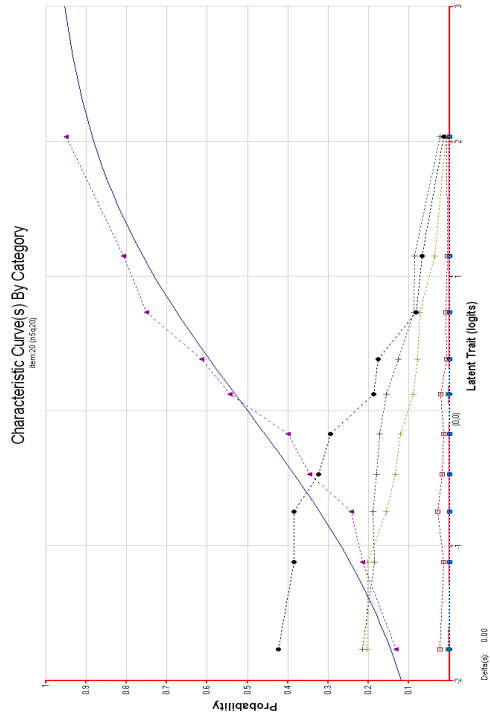
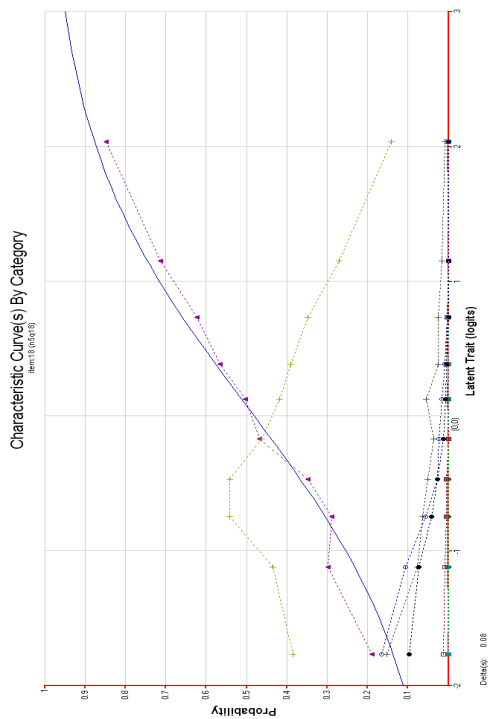
Year 5 Numeracy

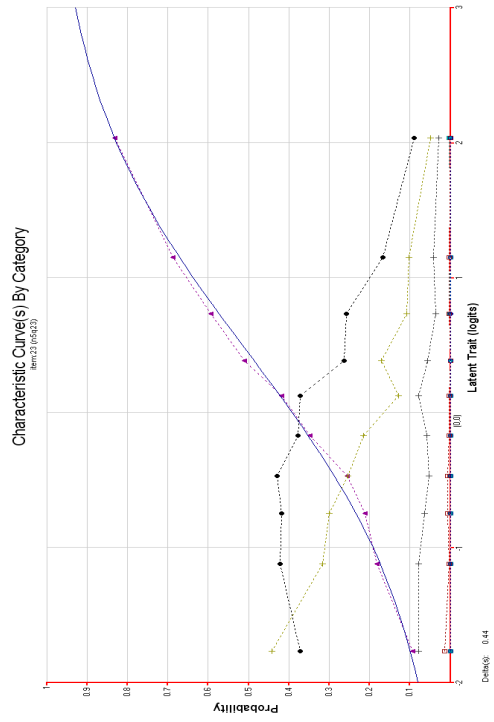
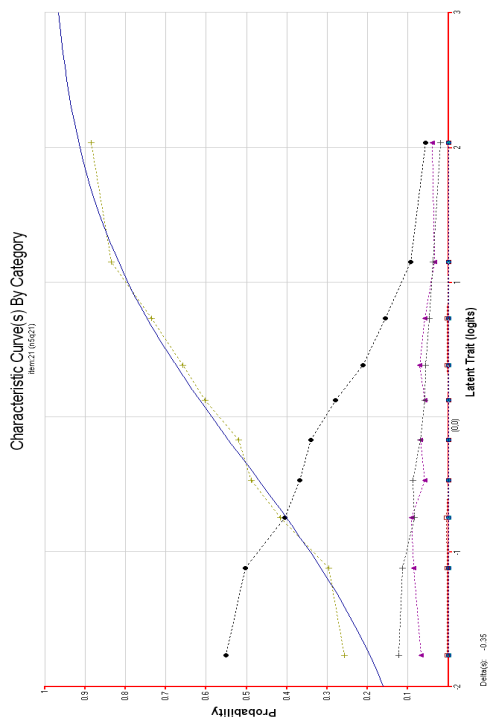
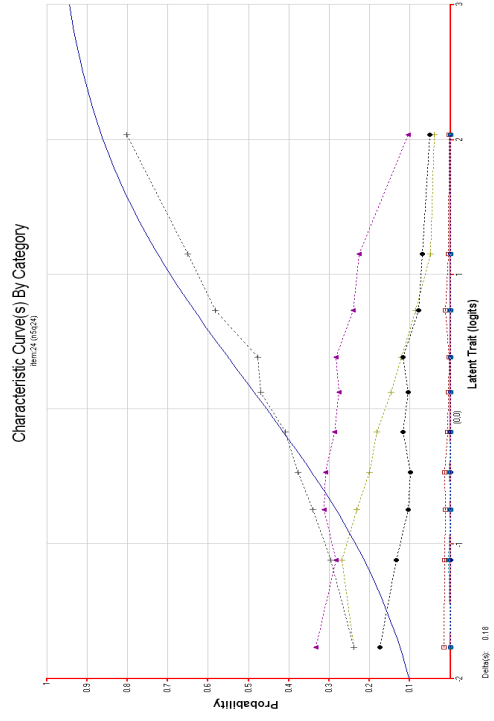
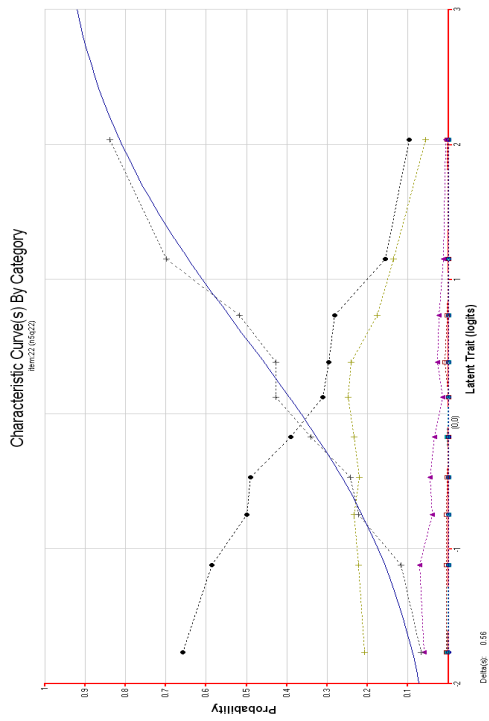


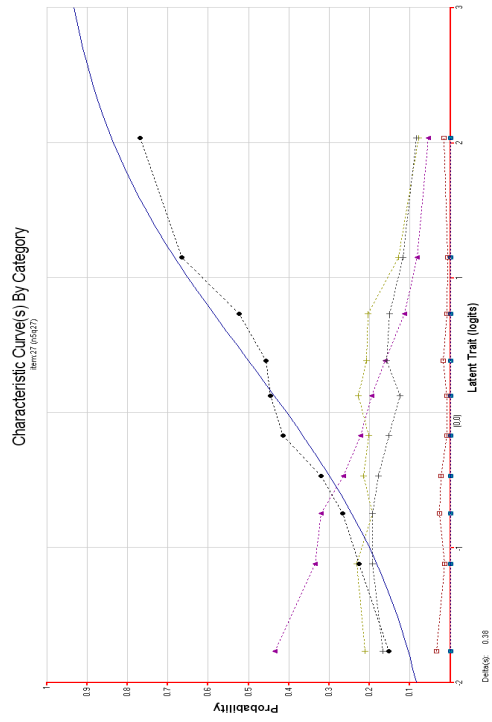
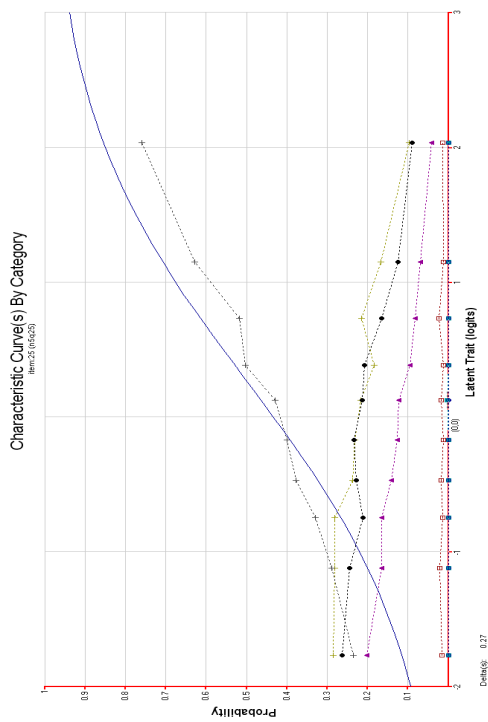
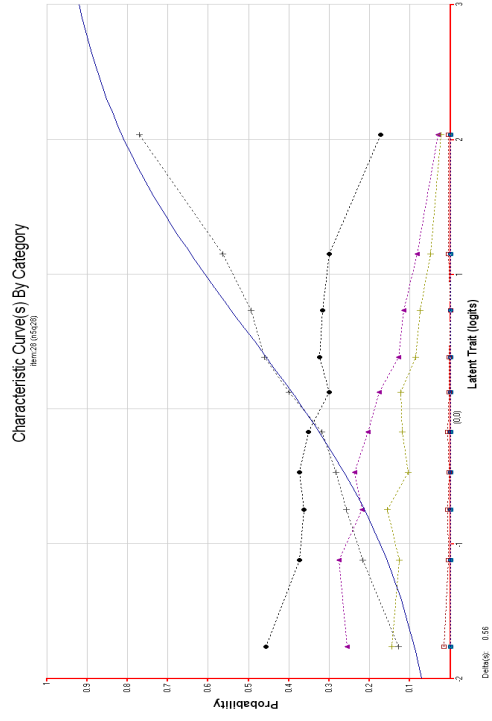
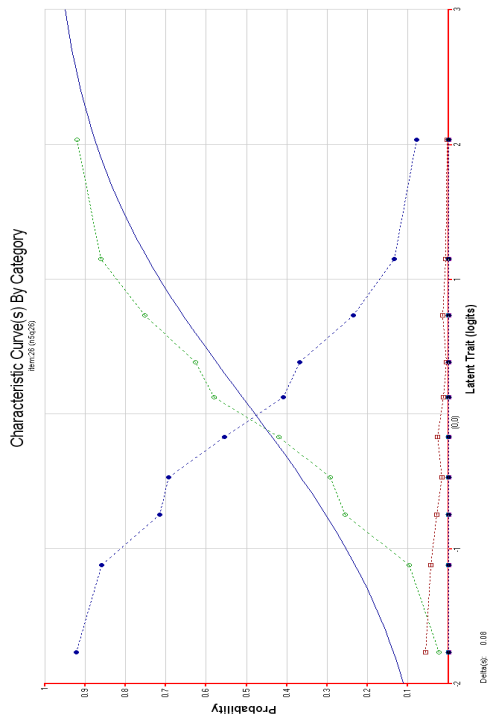


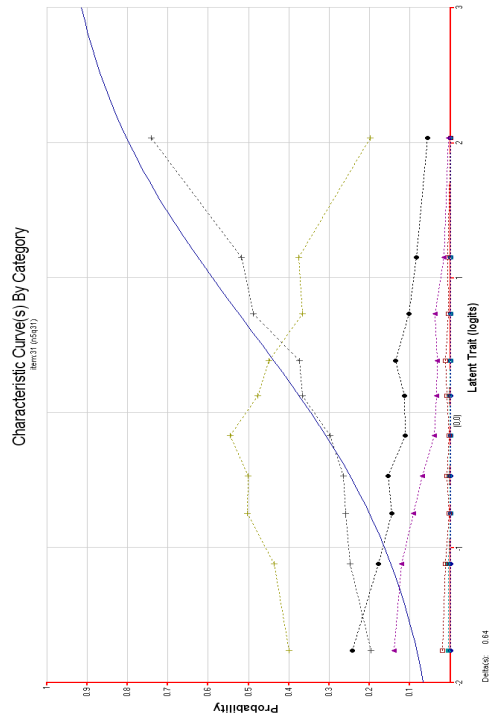
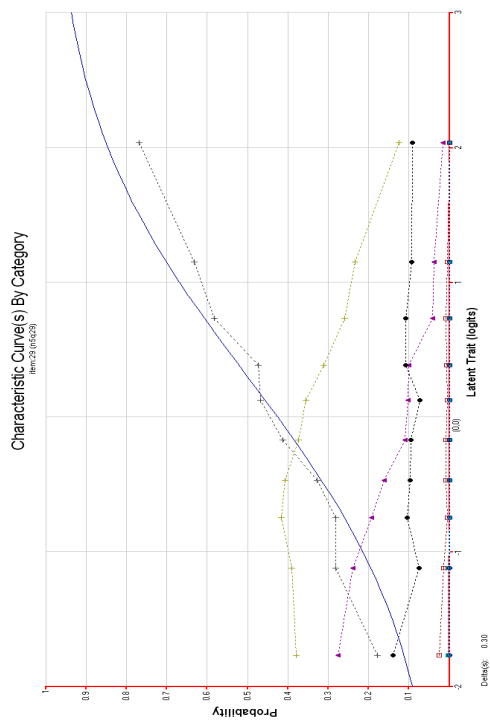
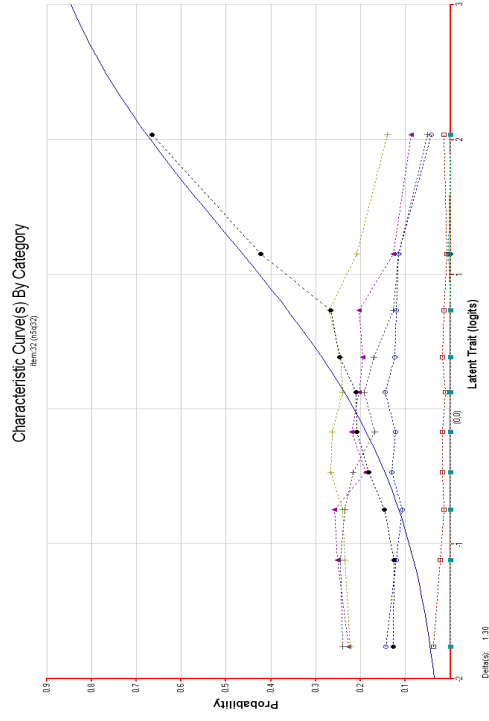
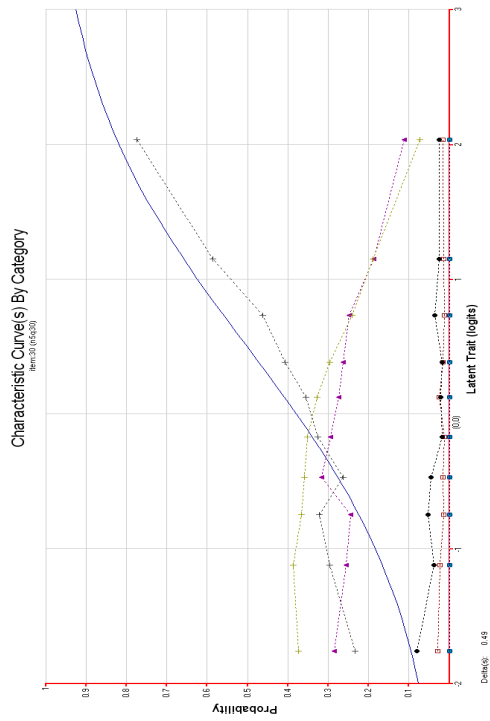


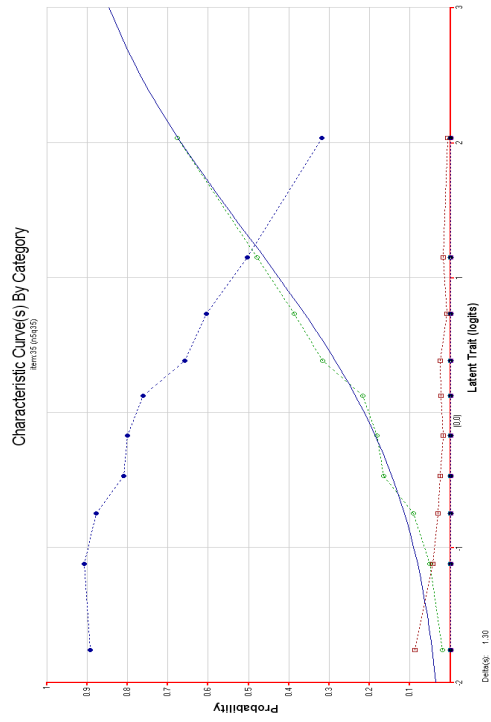
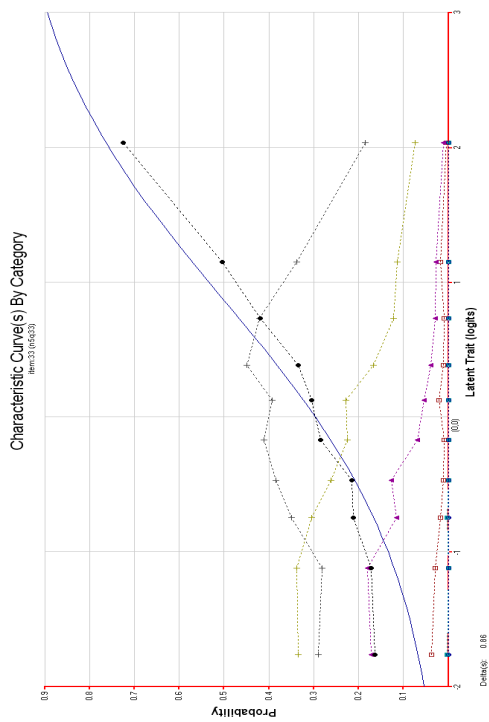
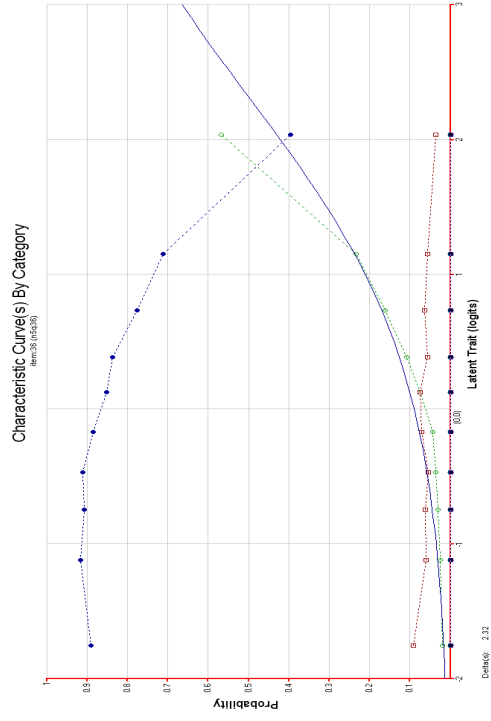
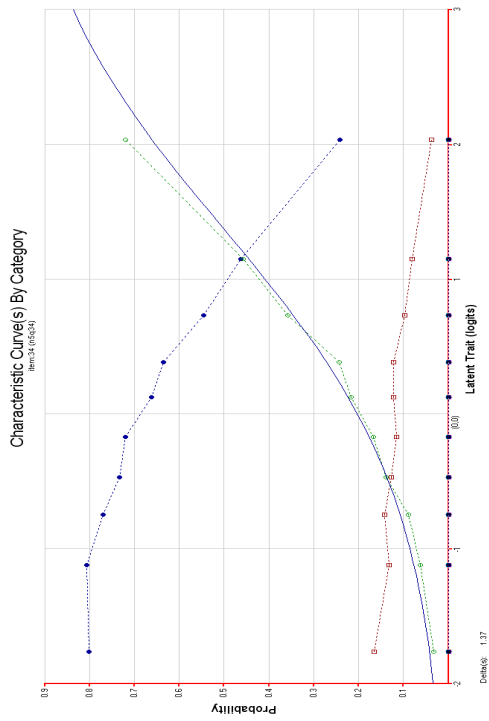


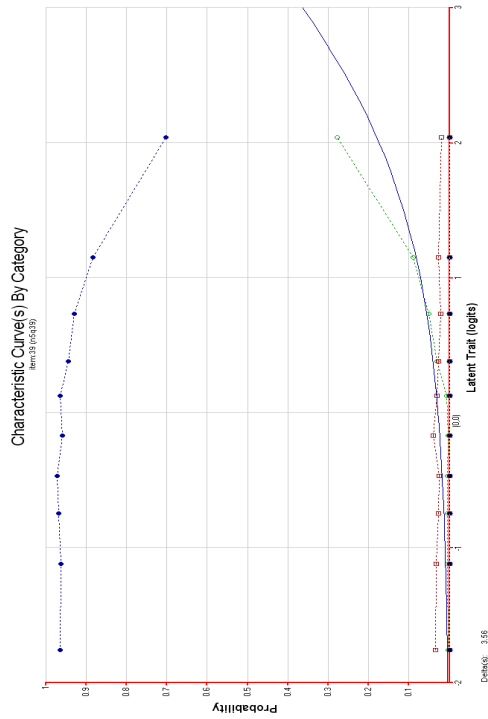
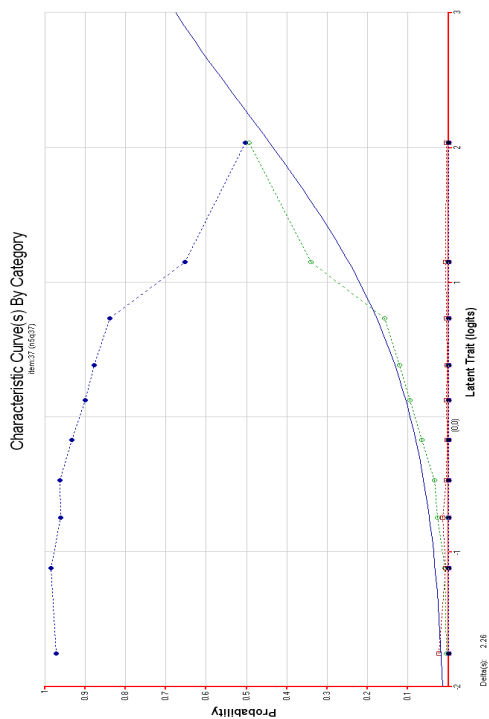
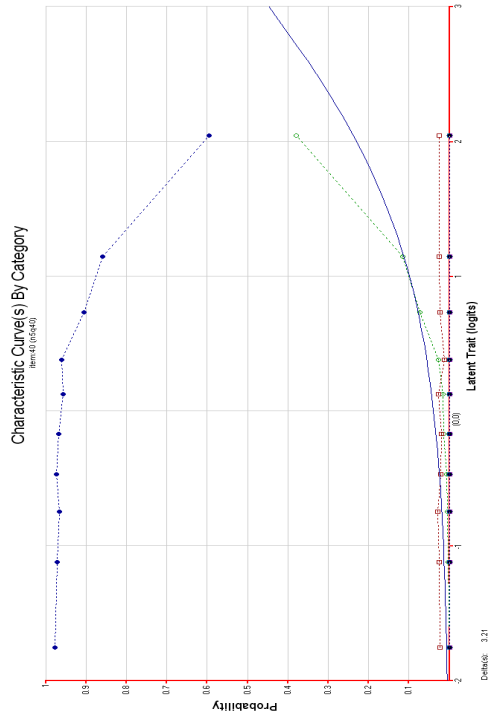
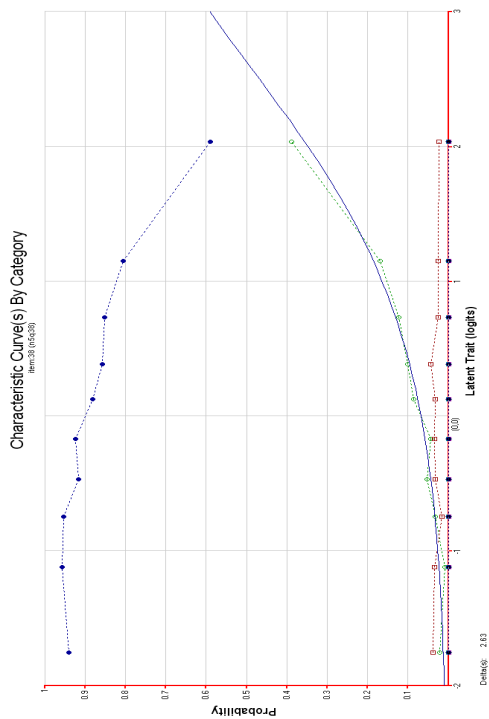




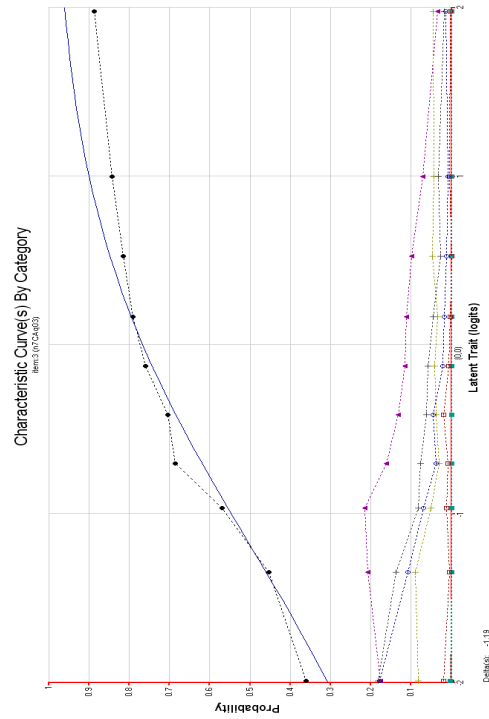
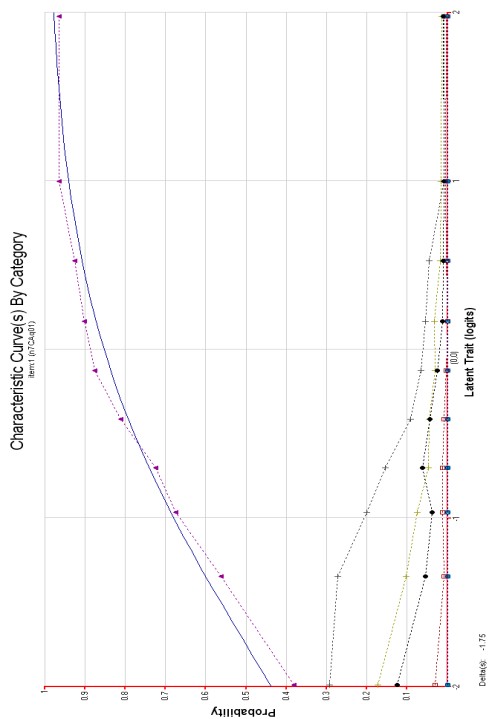
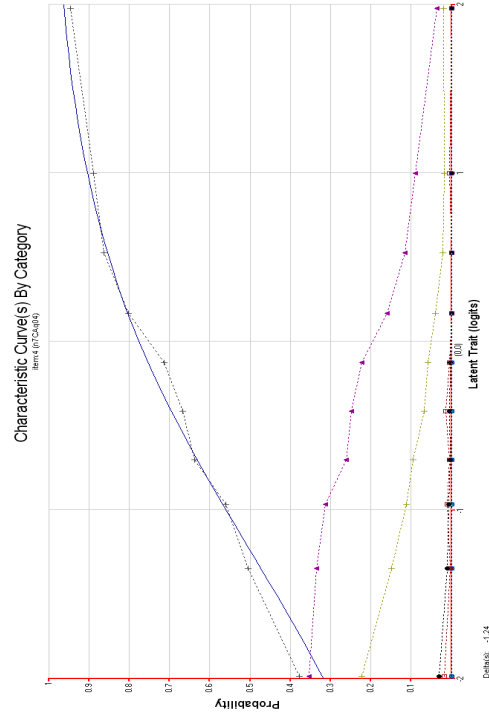
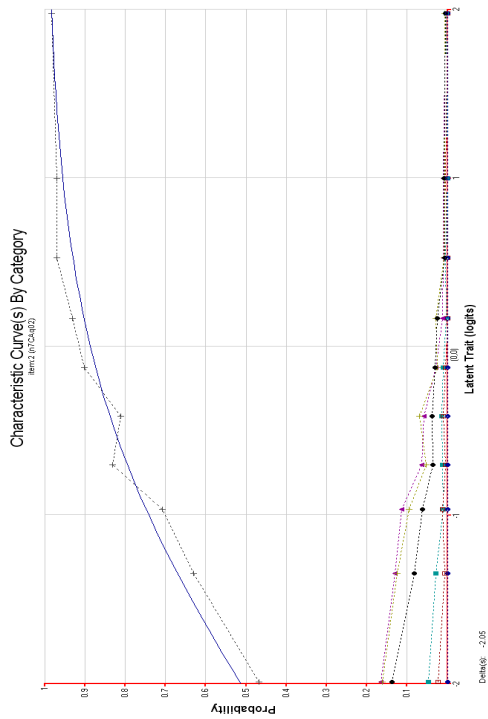


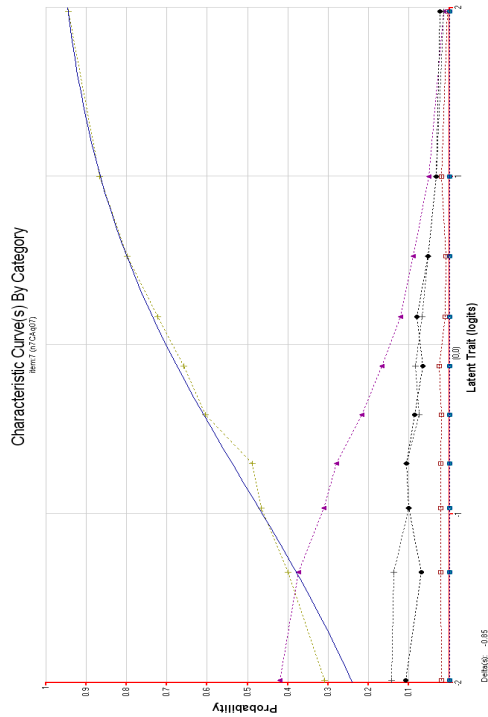
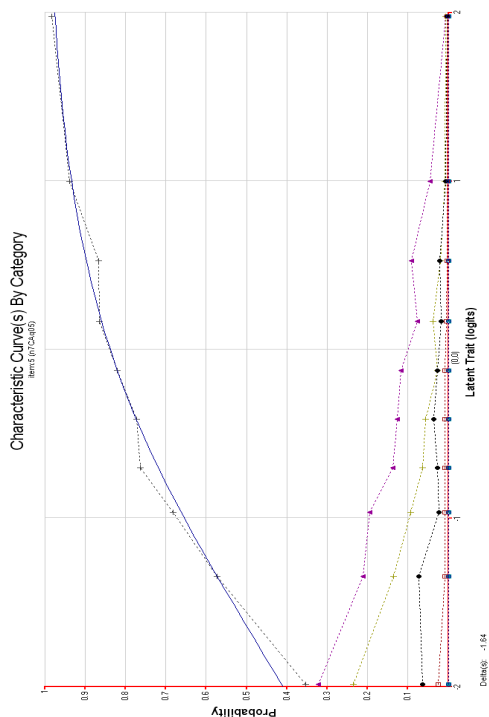
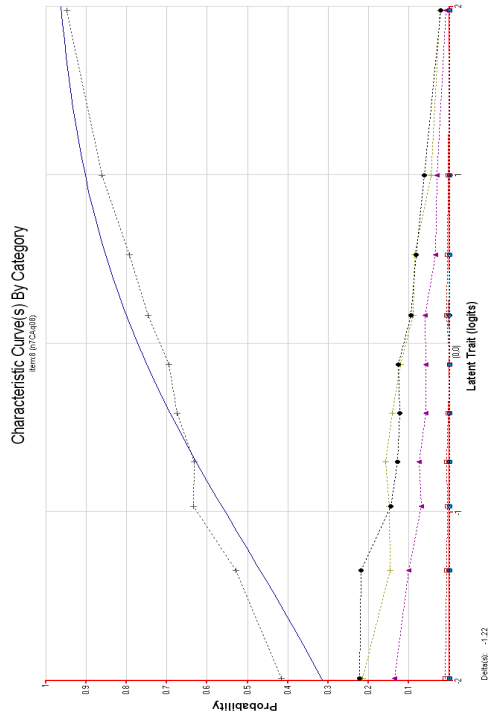
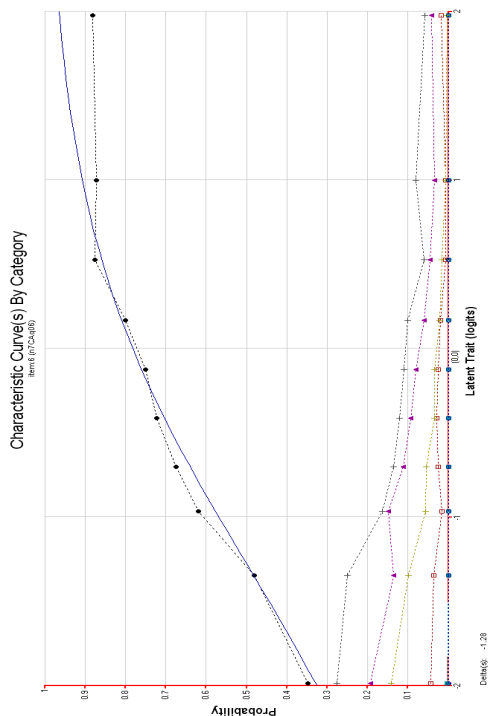


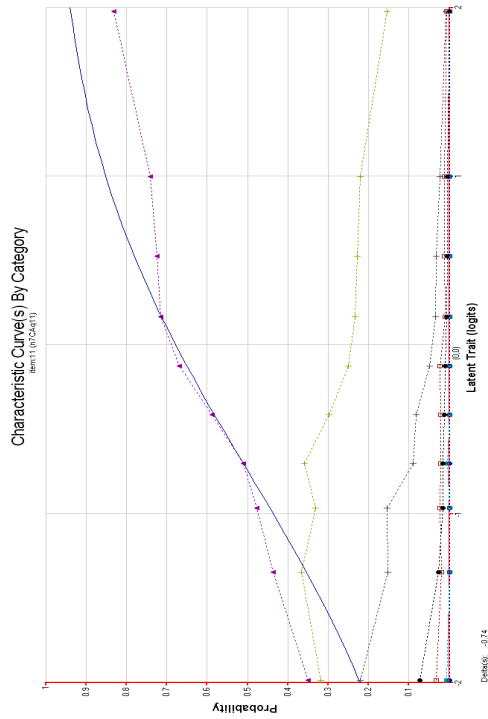
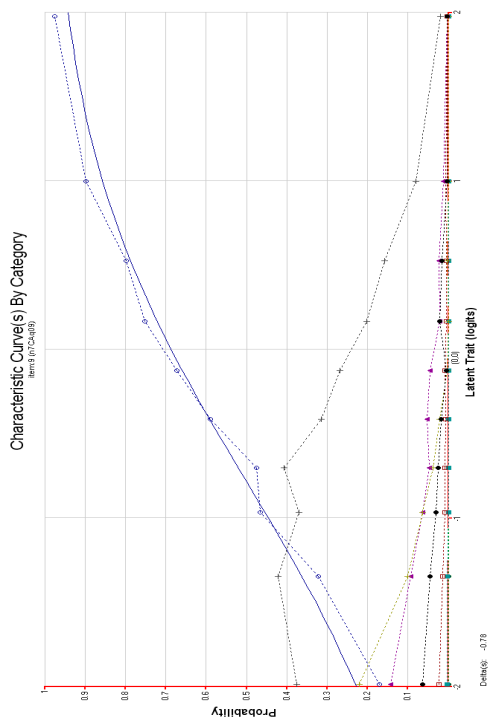
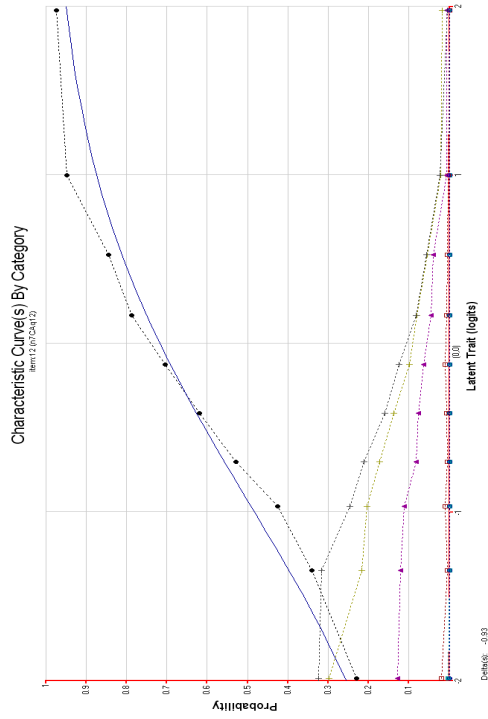
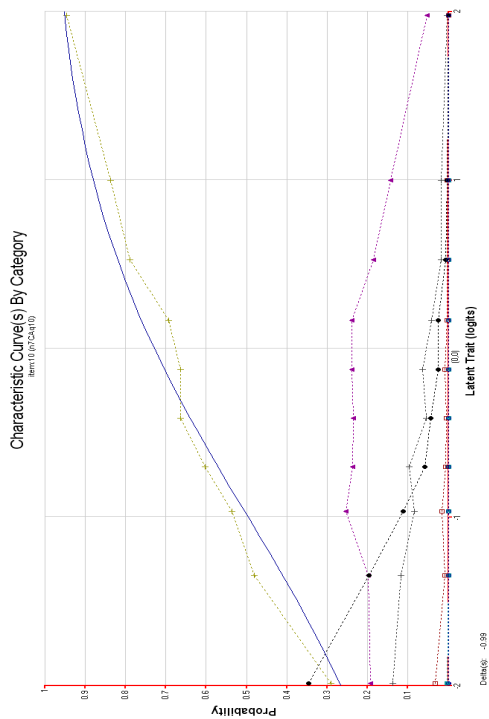


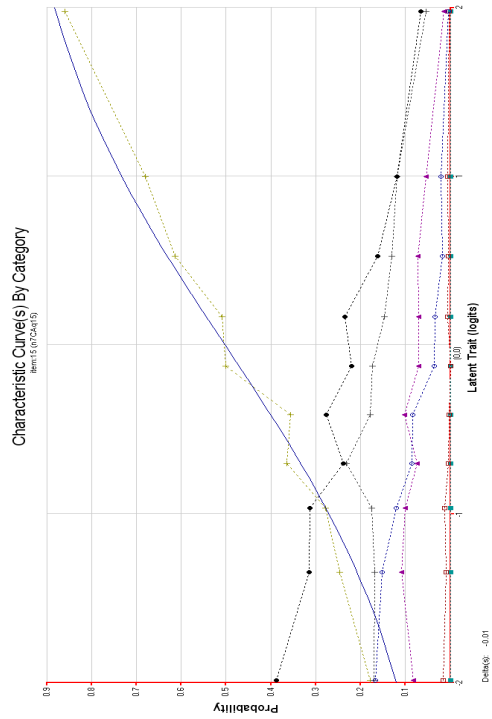
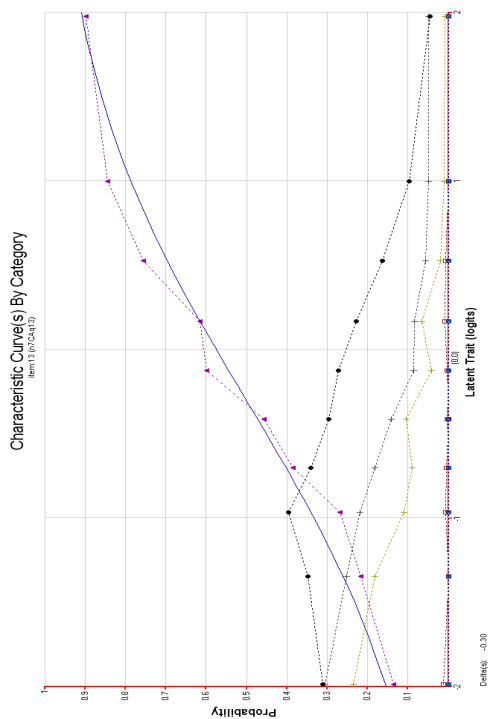
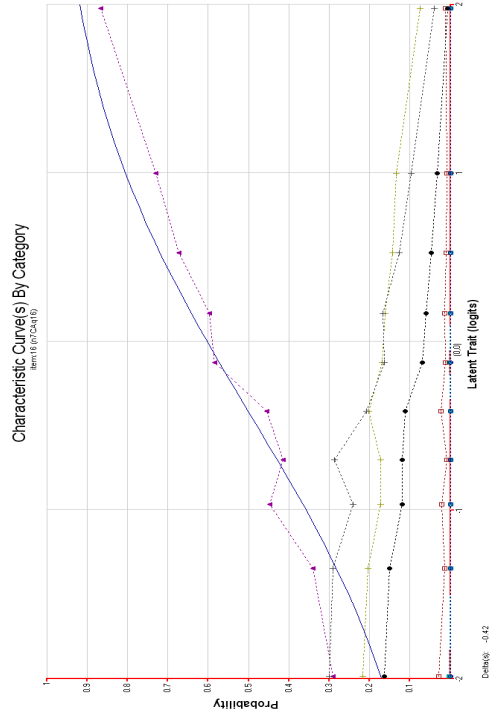
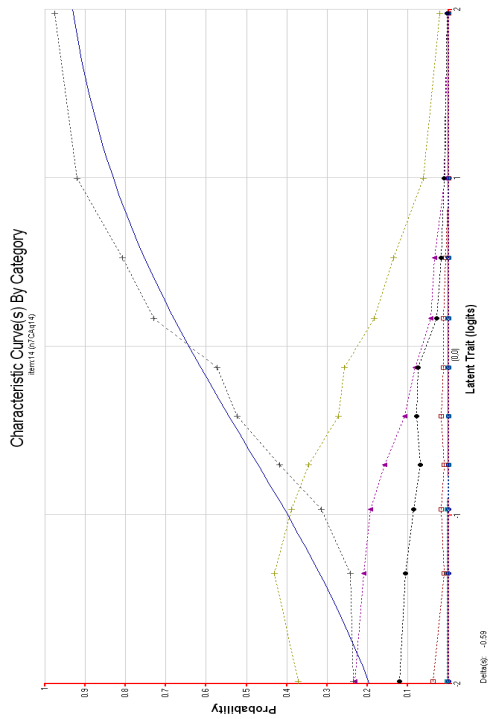


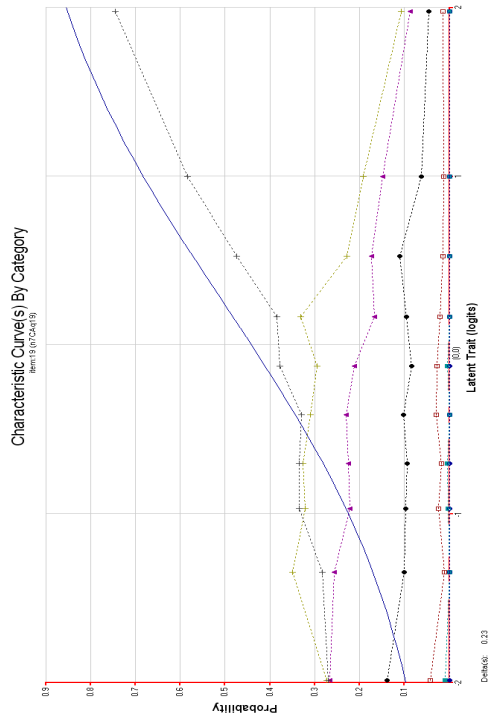
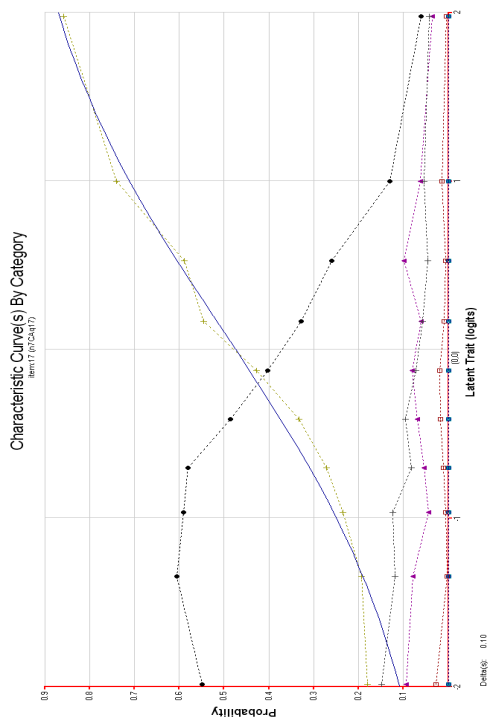
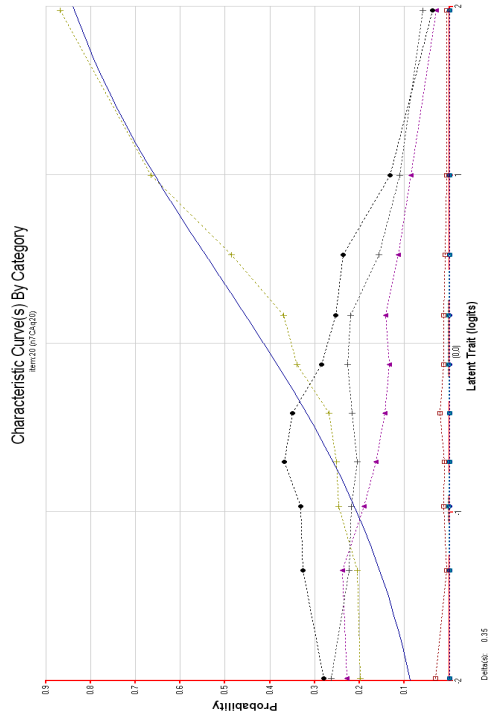
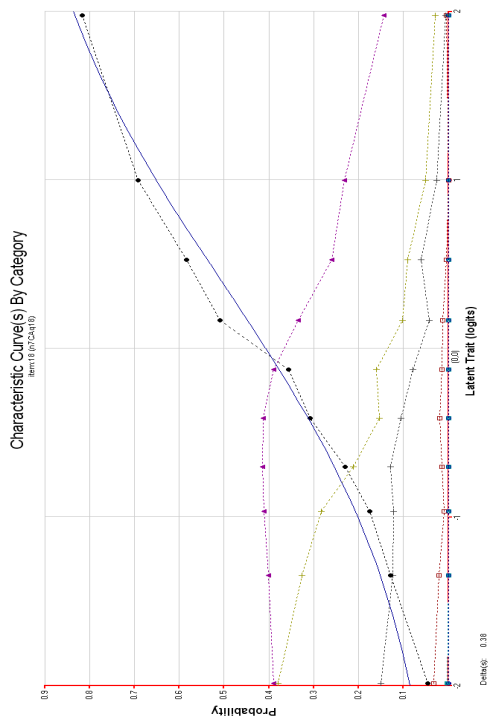
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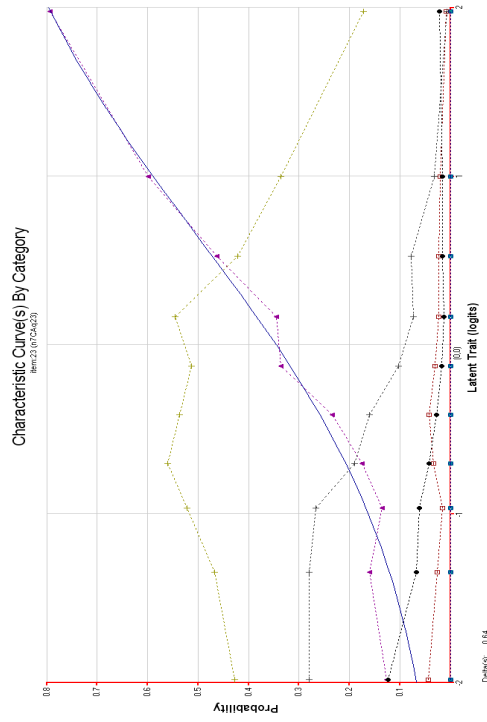
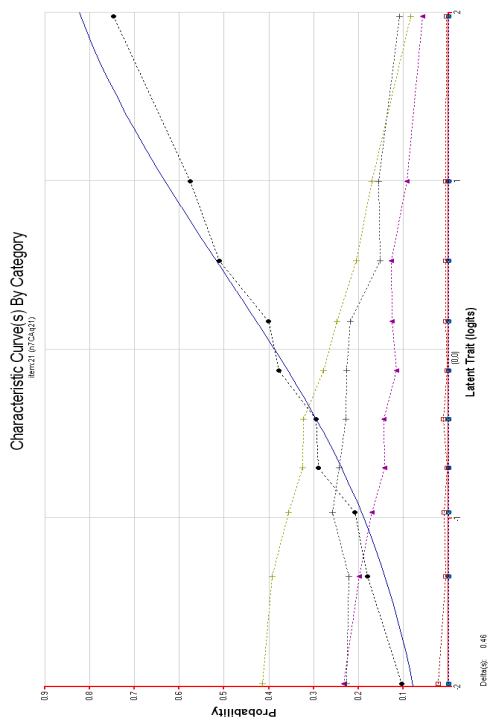
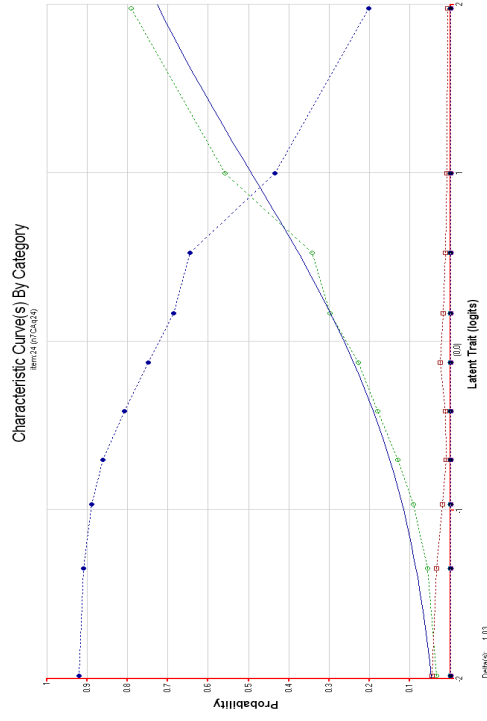
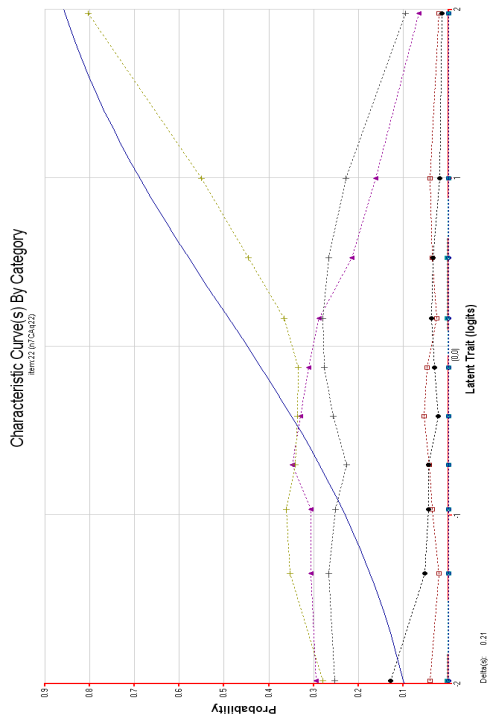


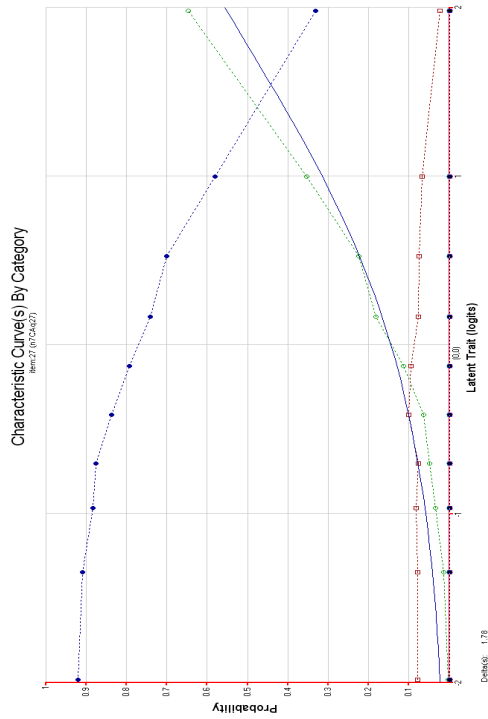
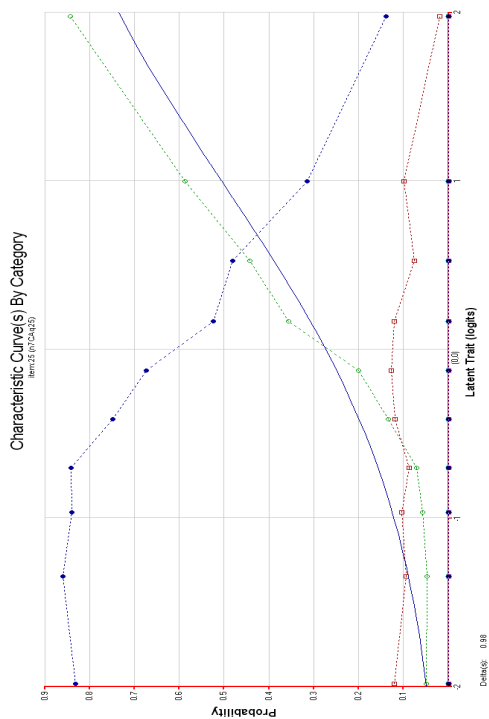
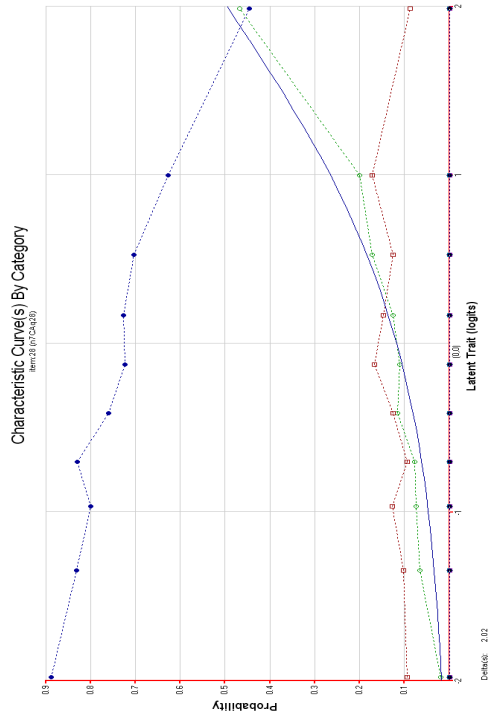
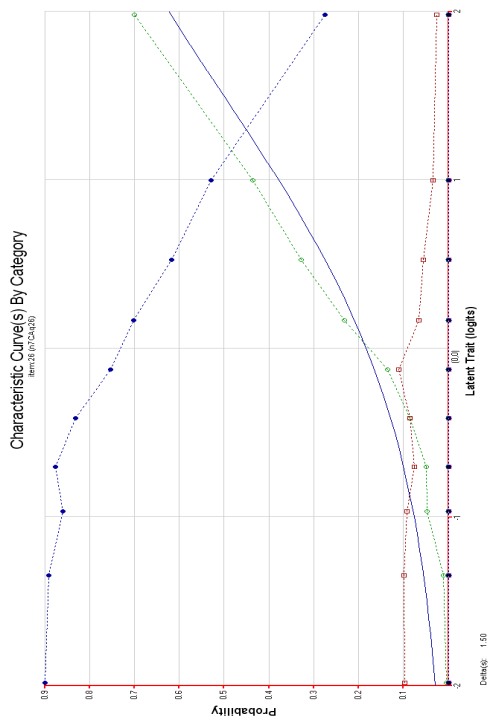


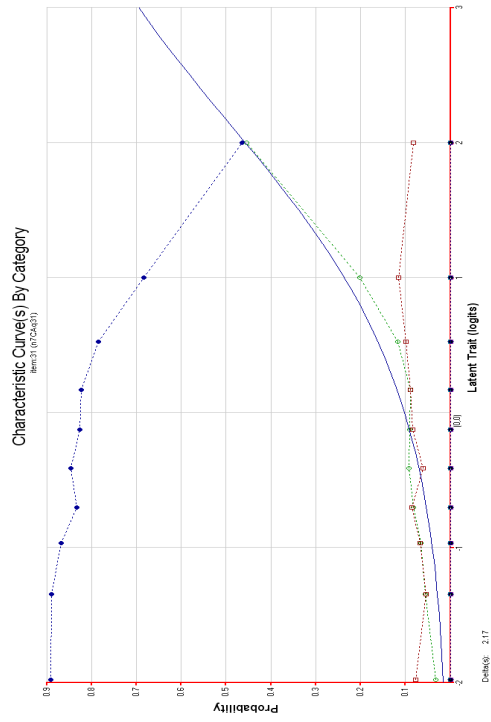
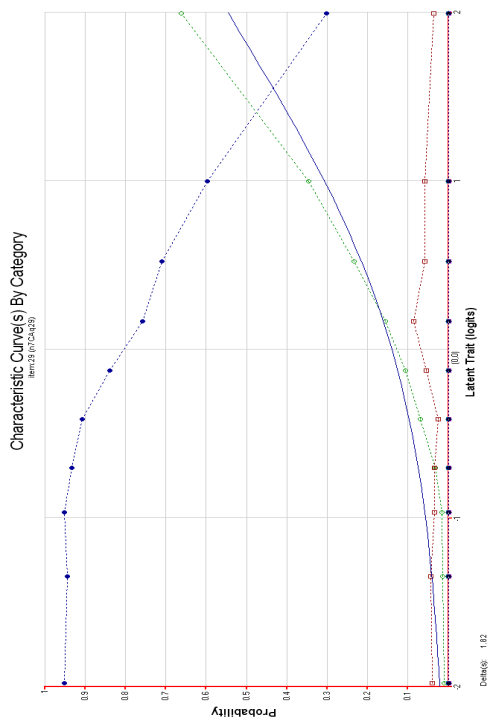
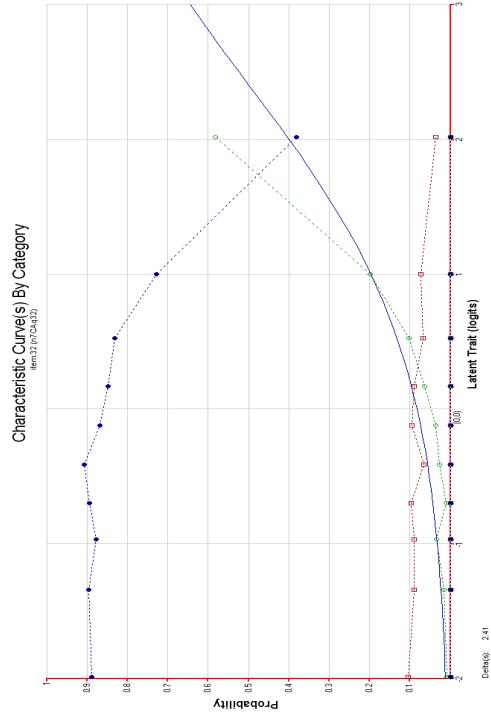
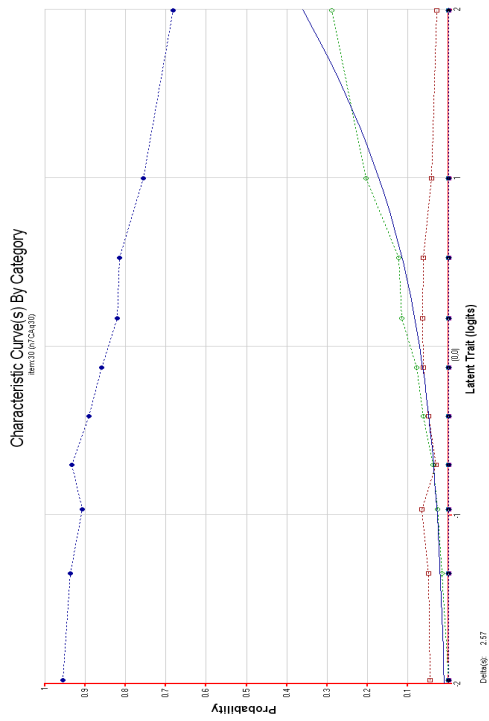


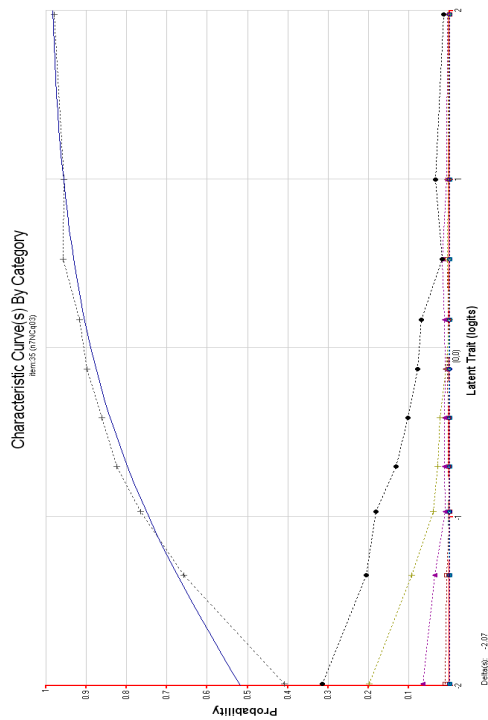
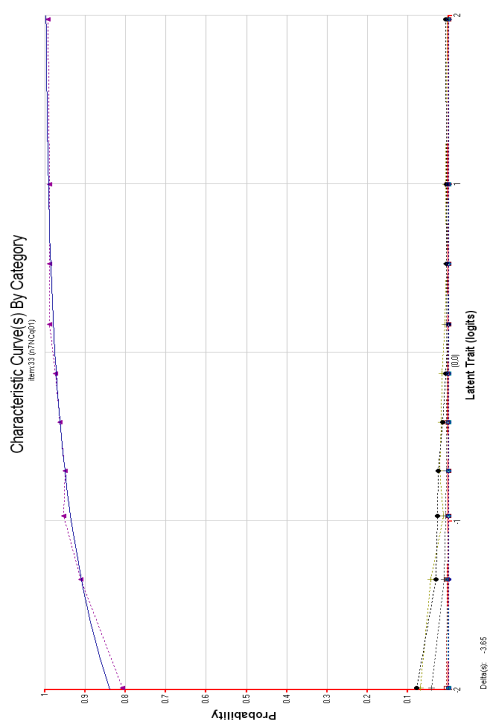
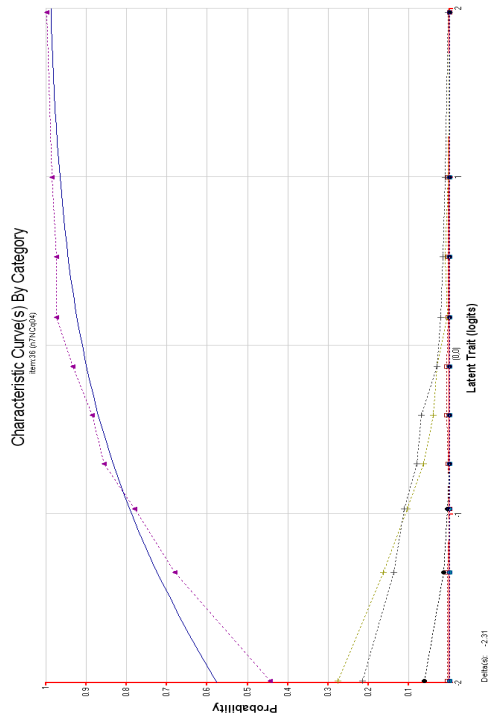
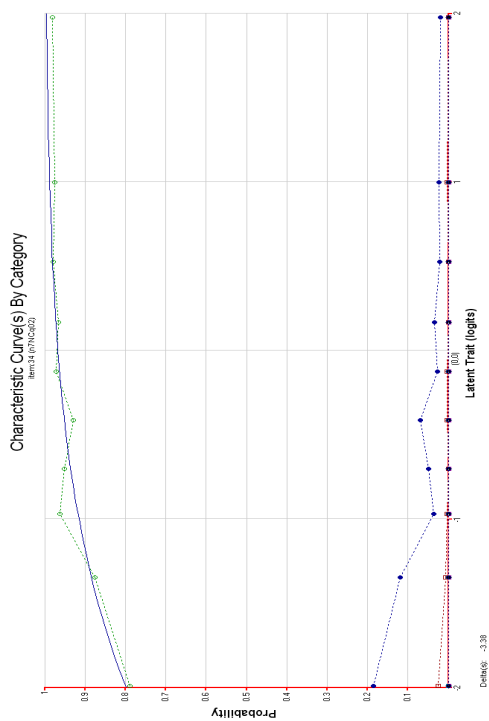


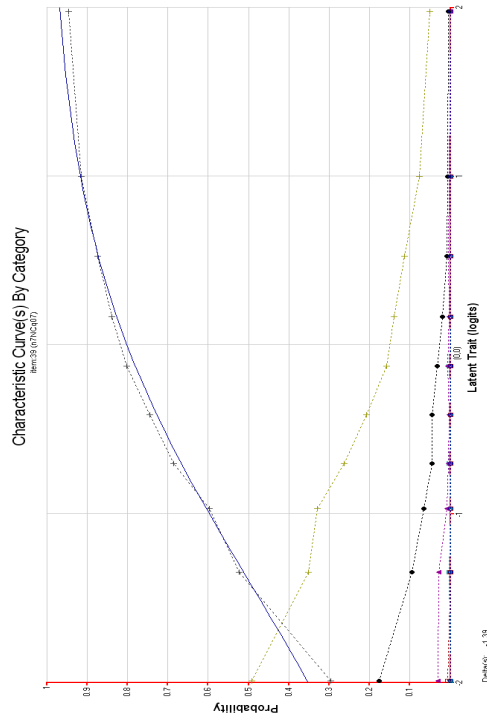
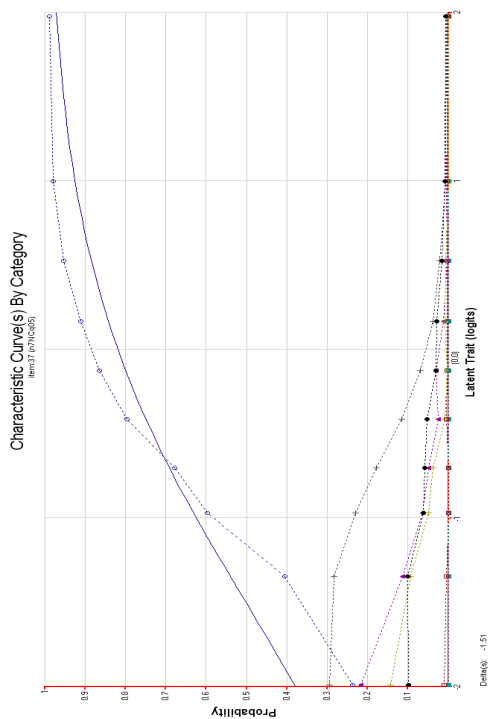
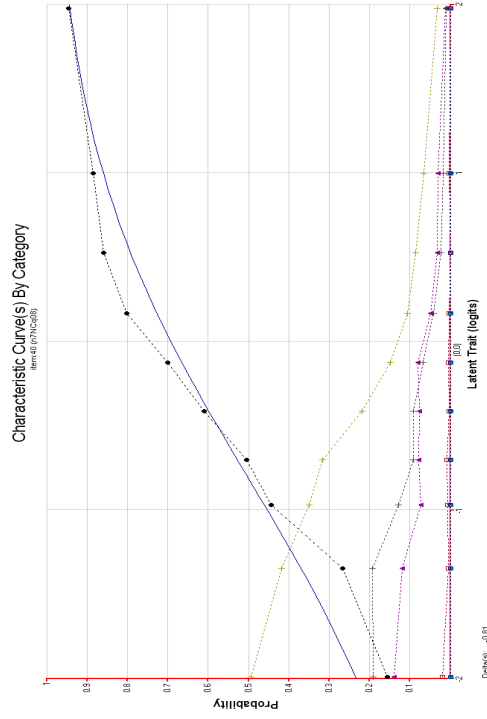
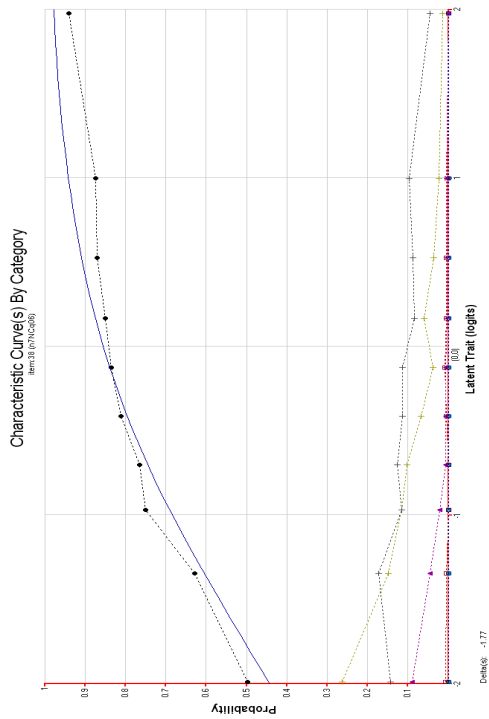


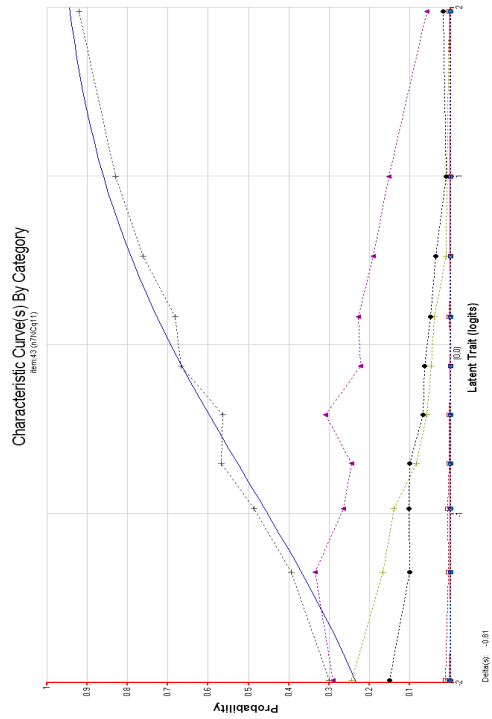
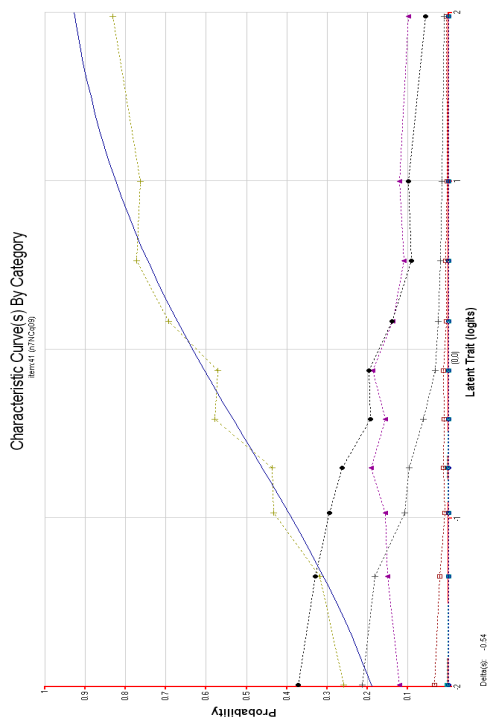
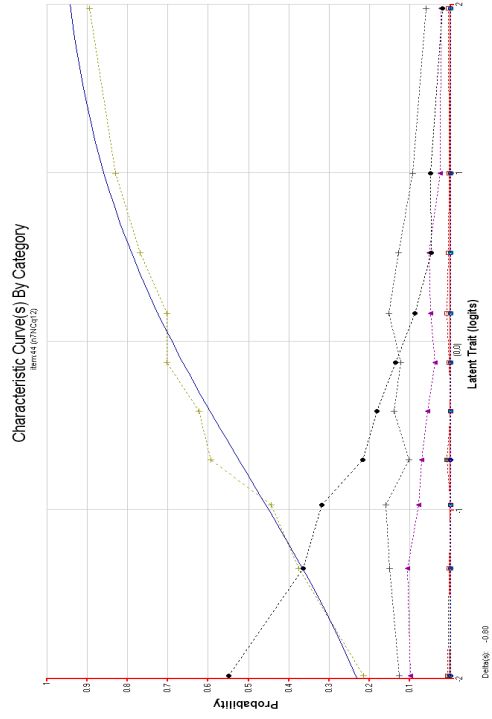
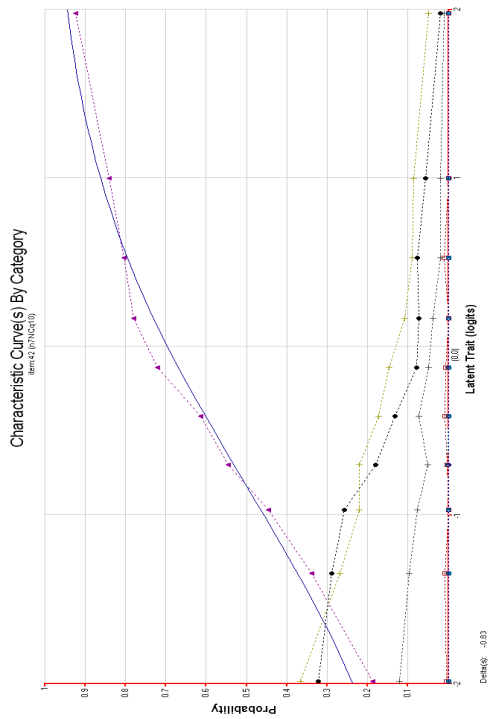


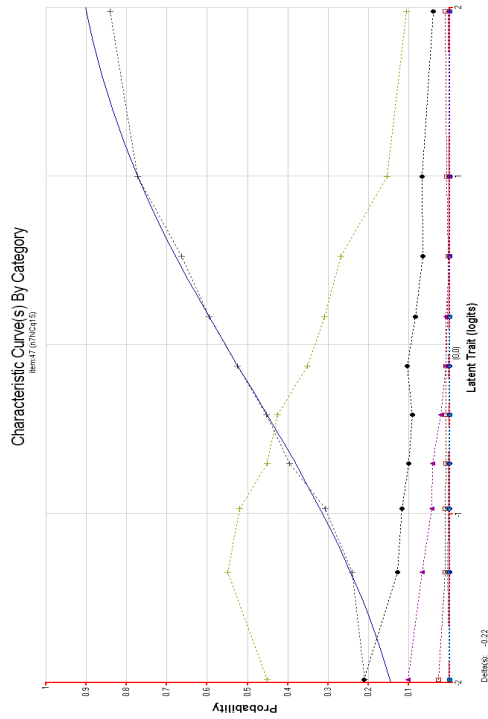
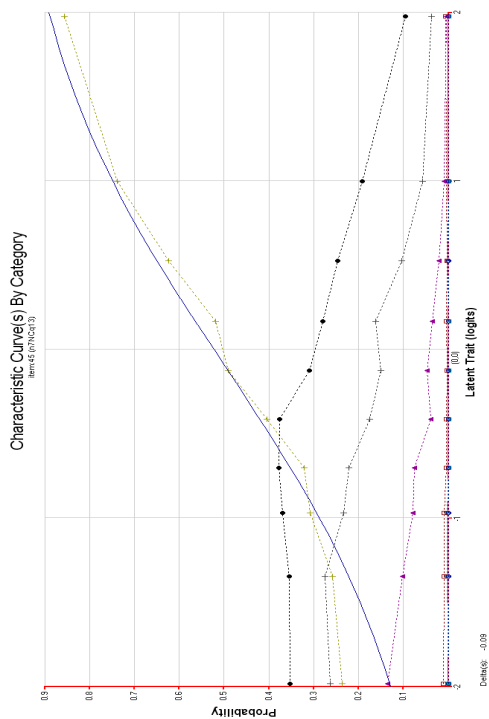
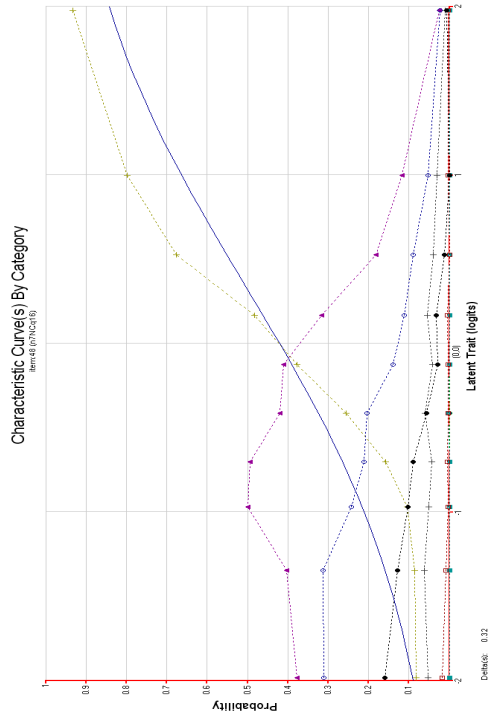
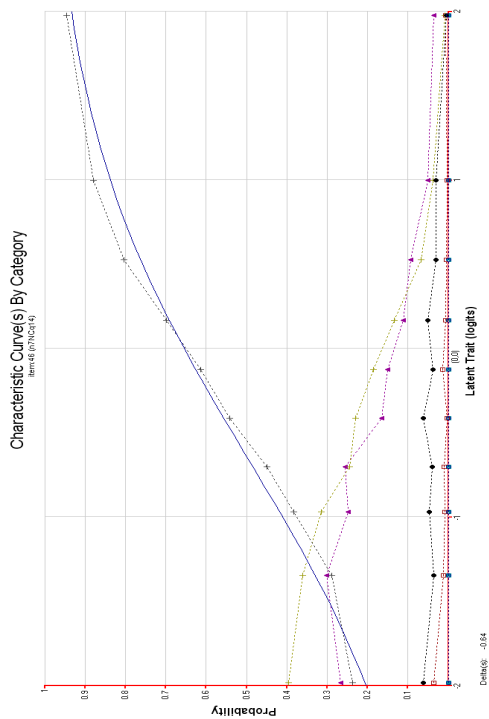


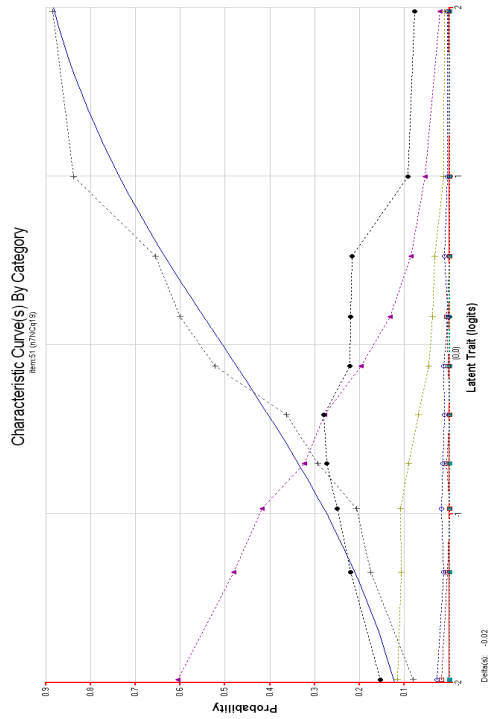
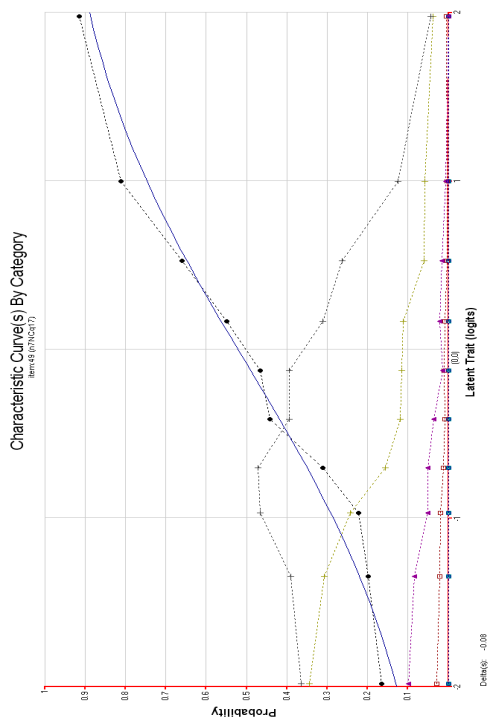
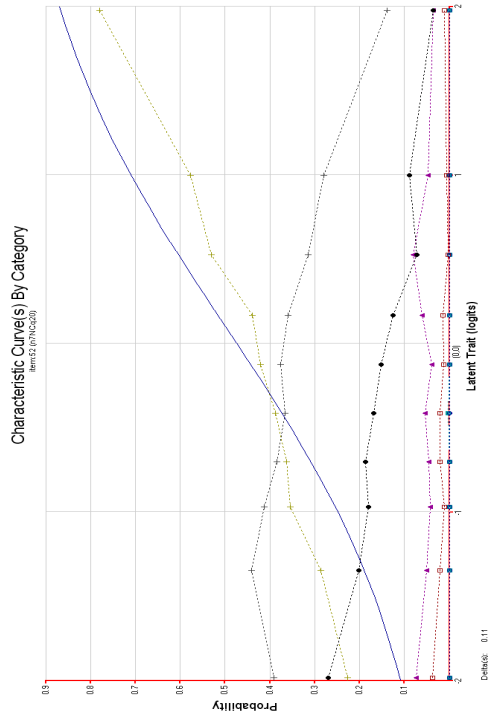
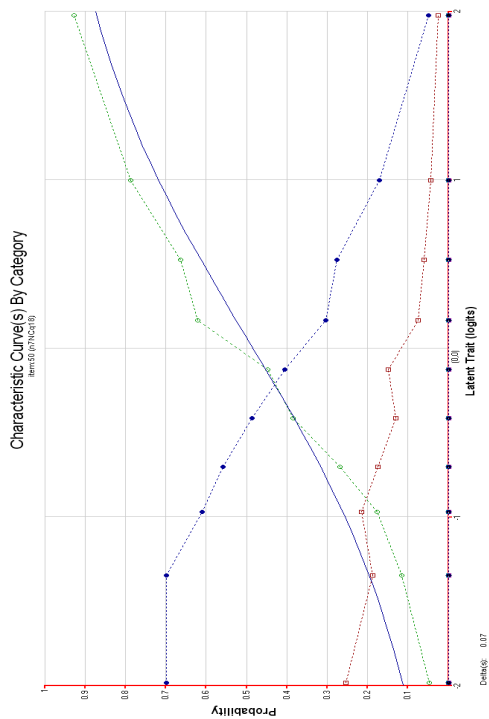


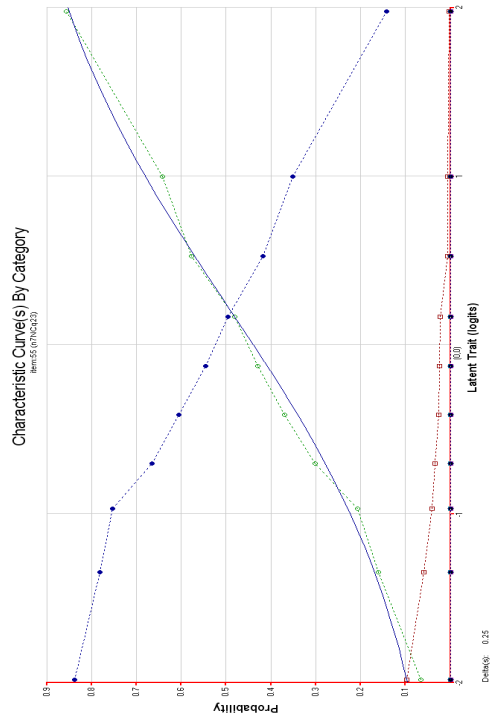
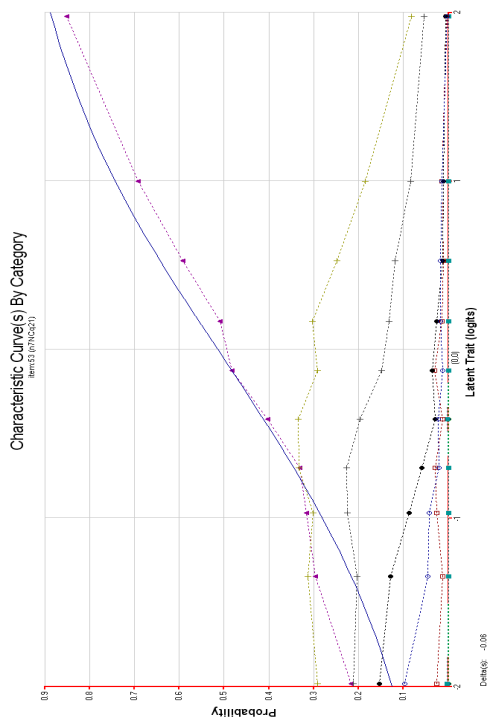
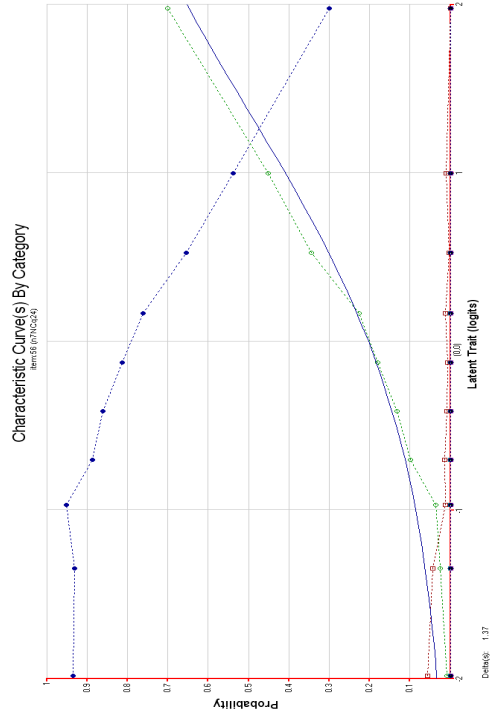
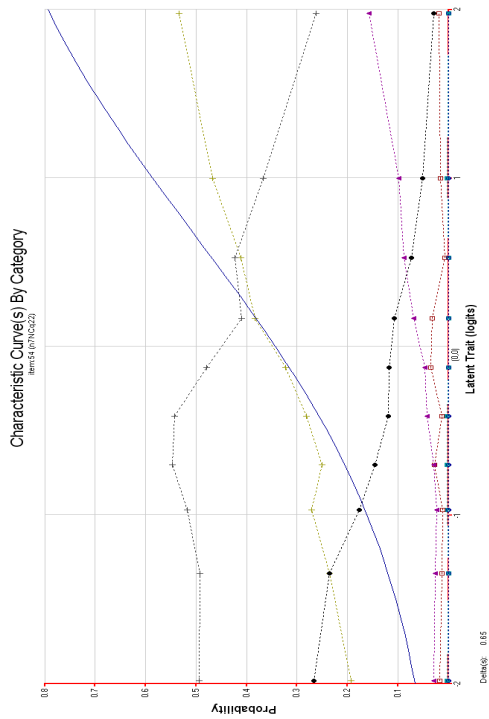


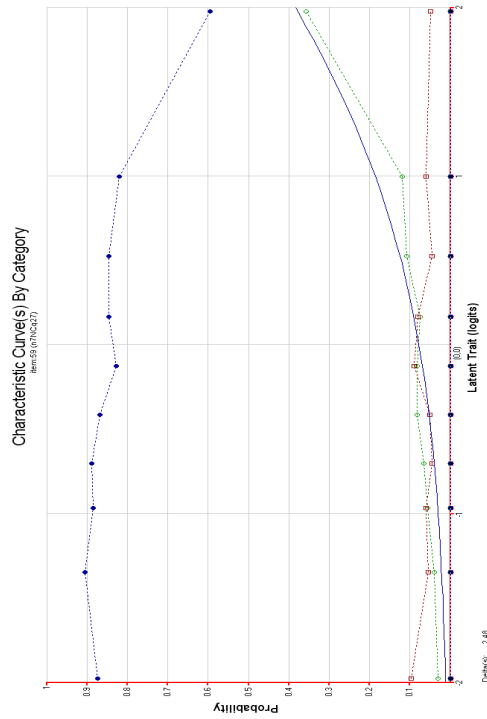
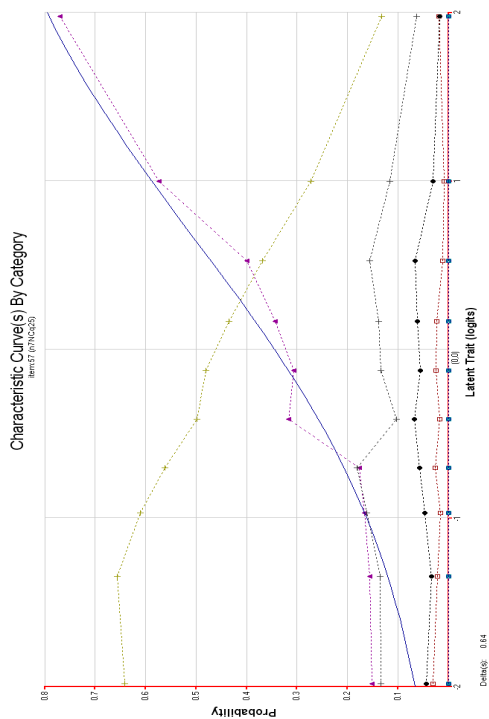
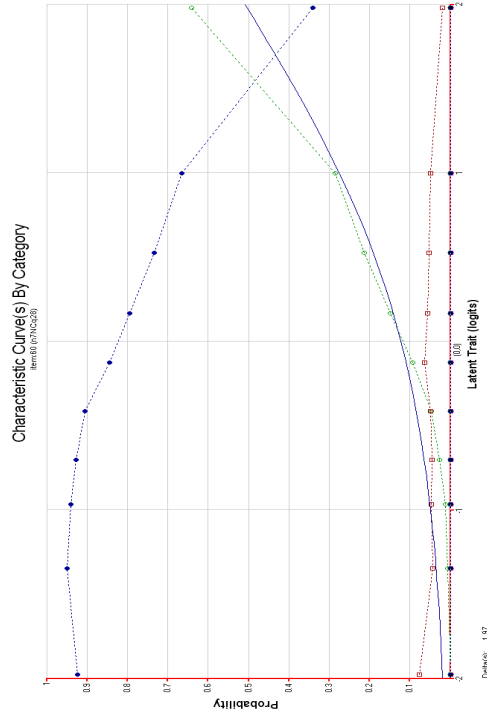
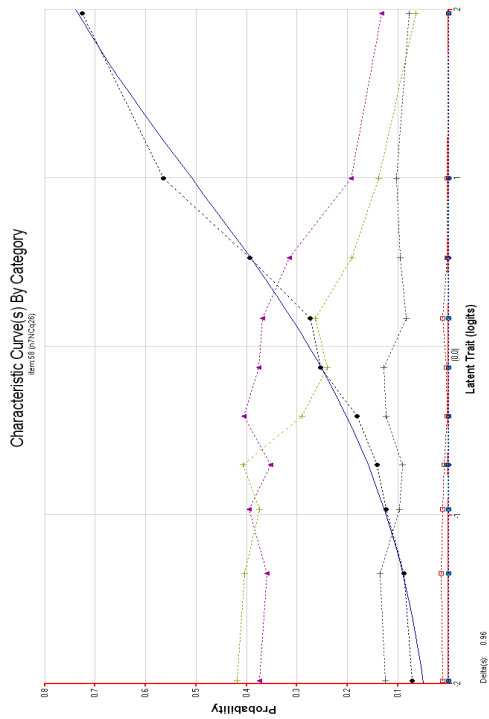


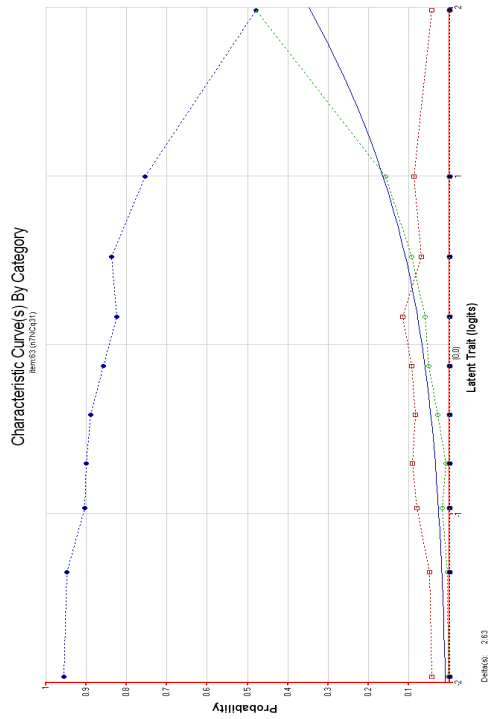
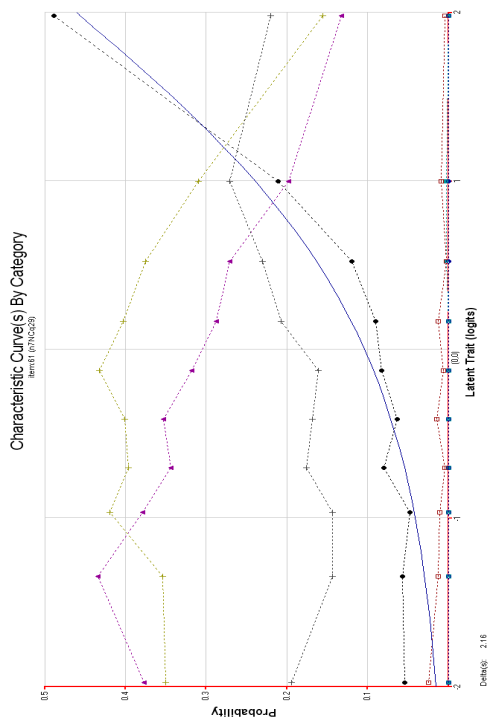
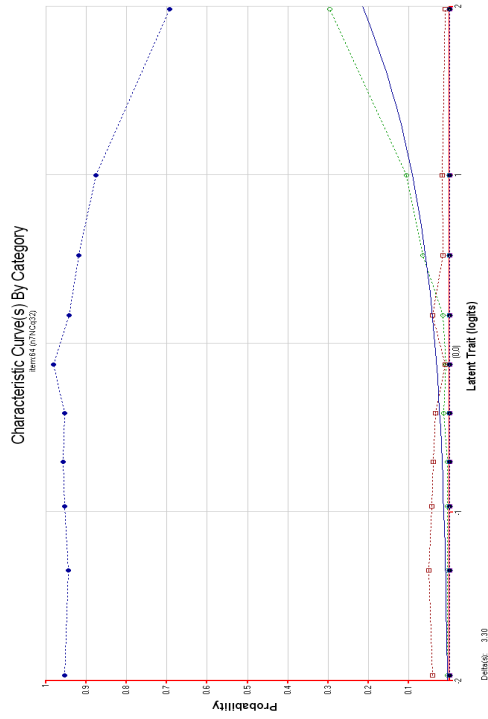
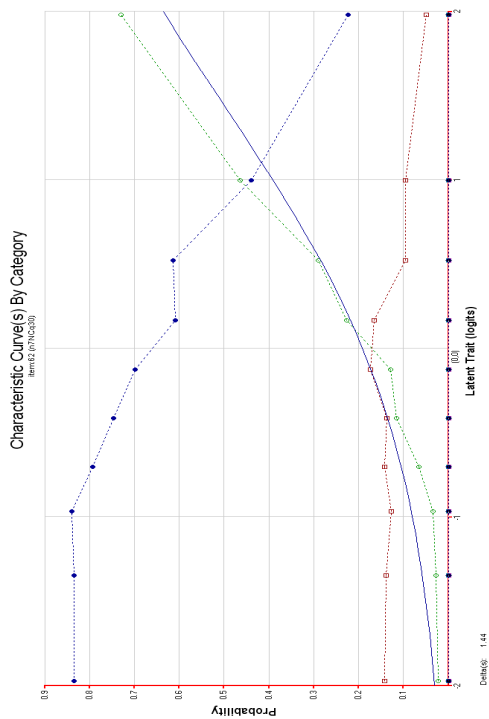




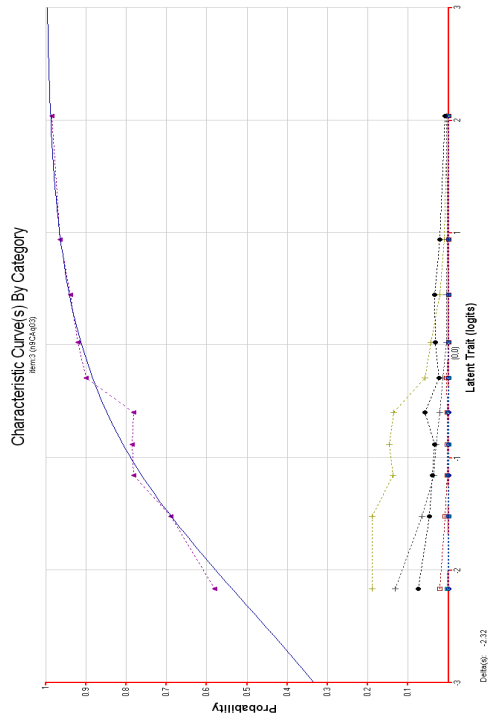
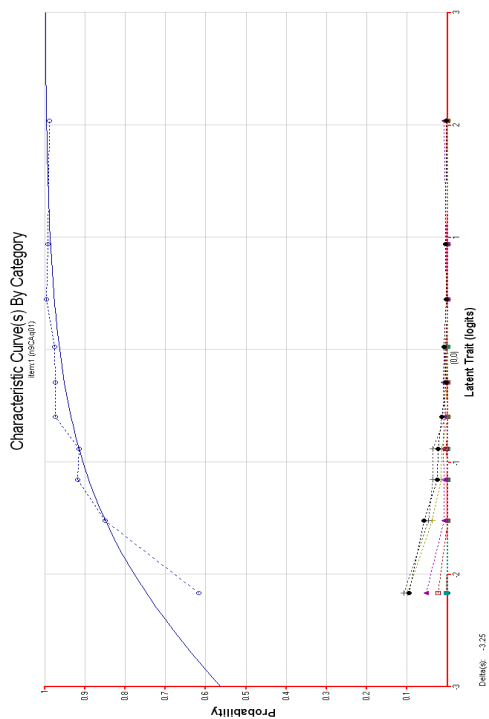
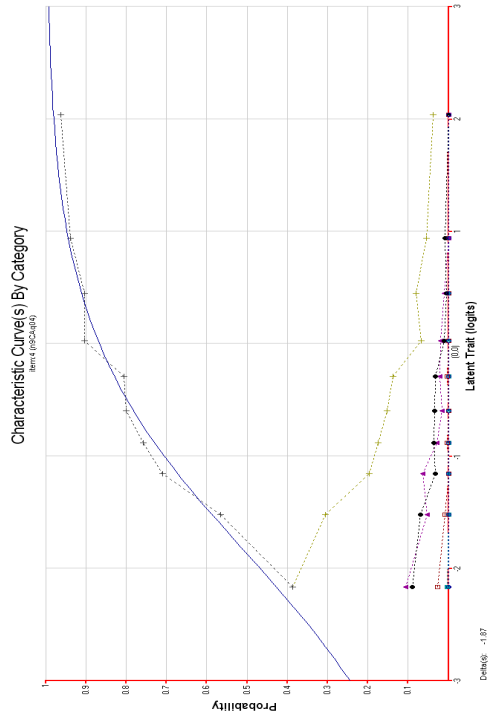
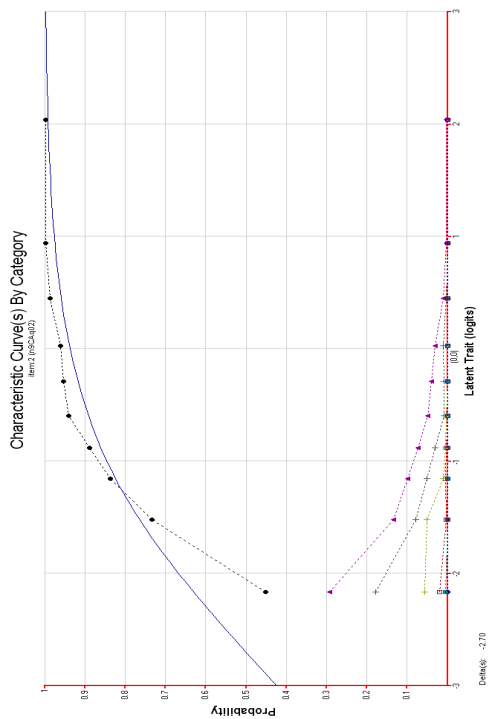


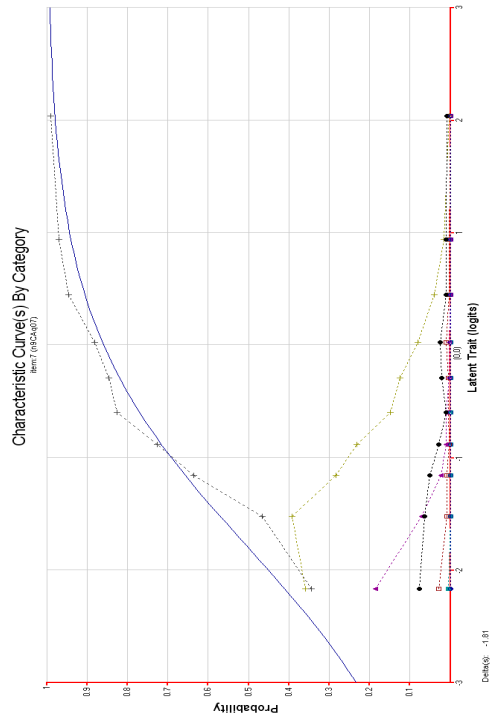
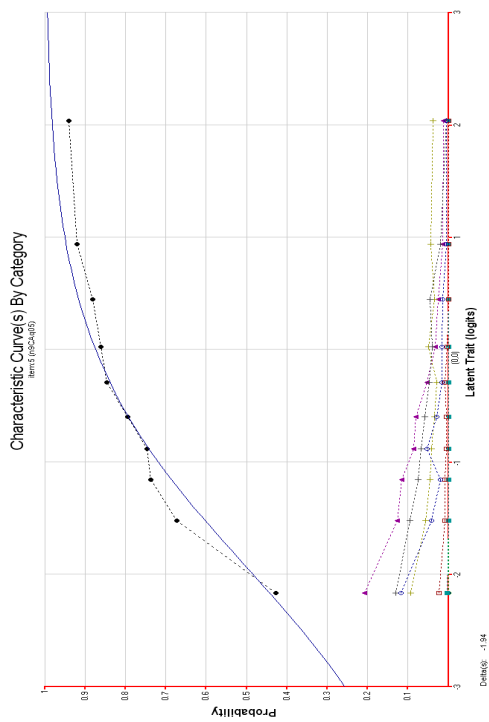
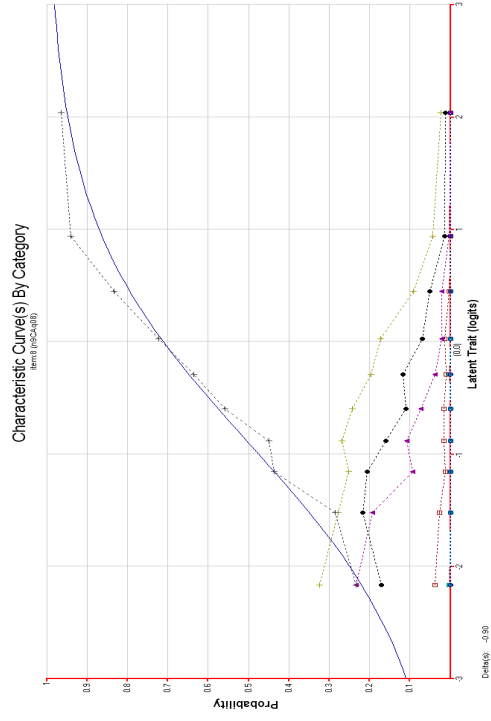
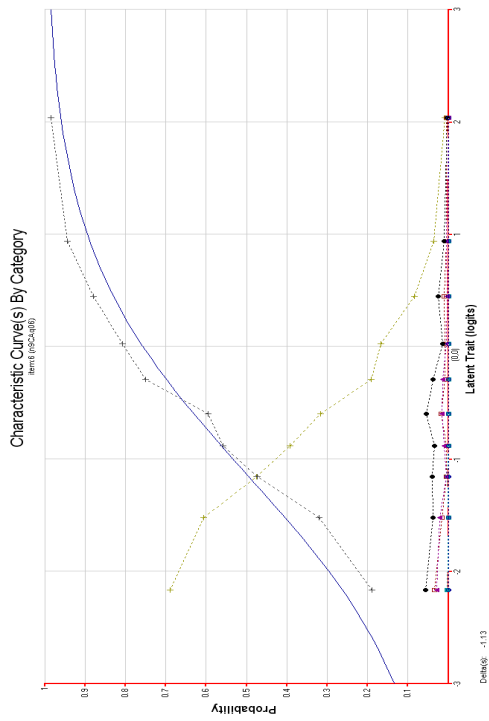


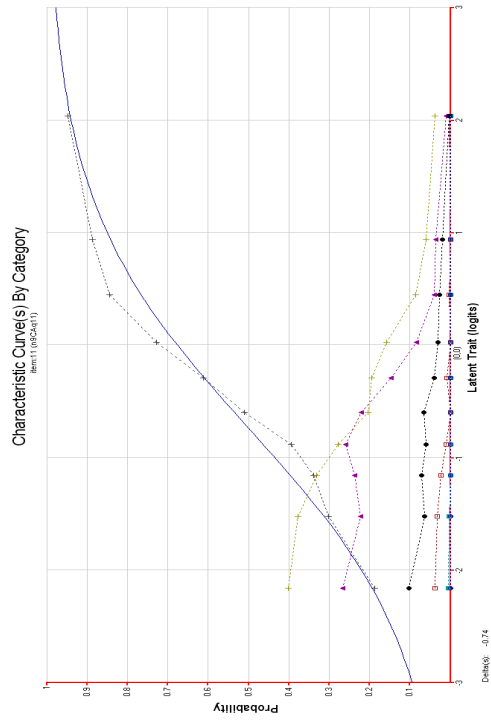
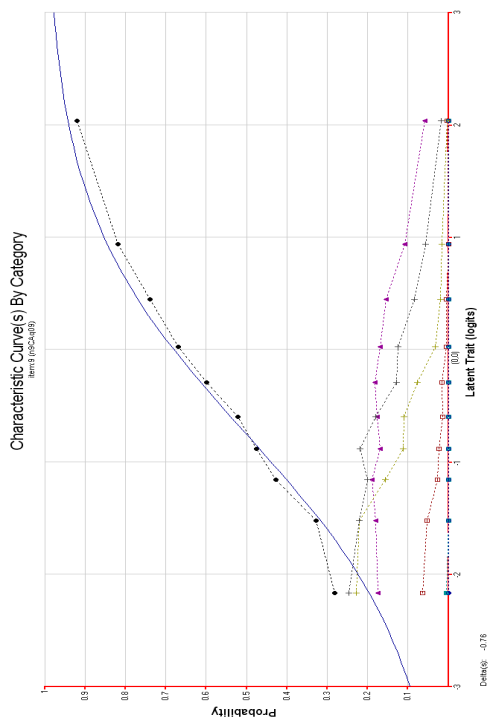
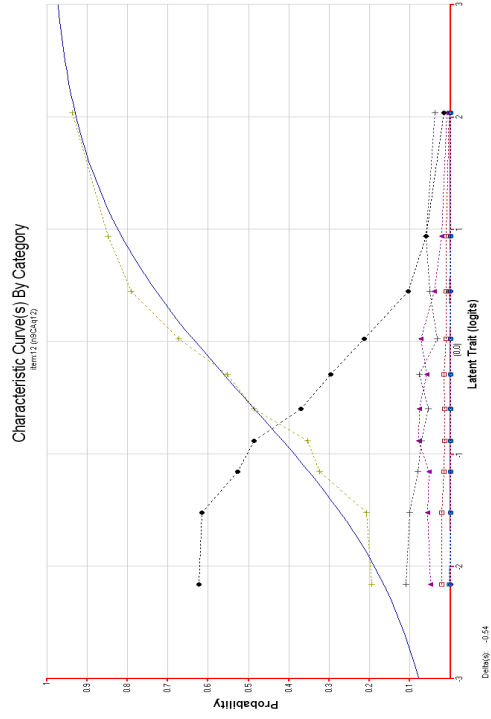
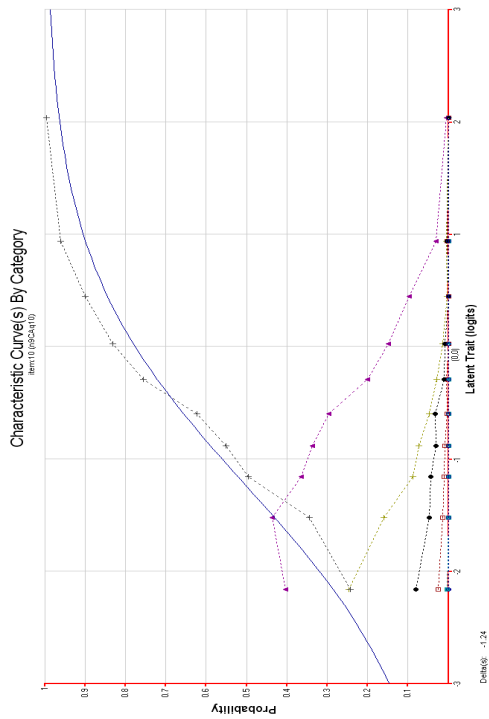


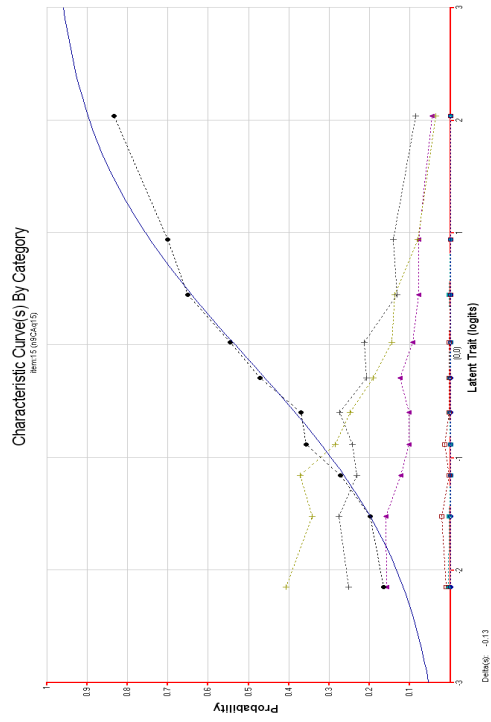
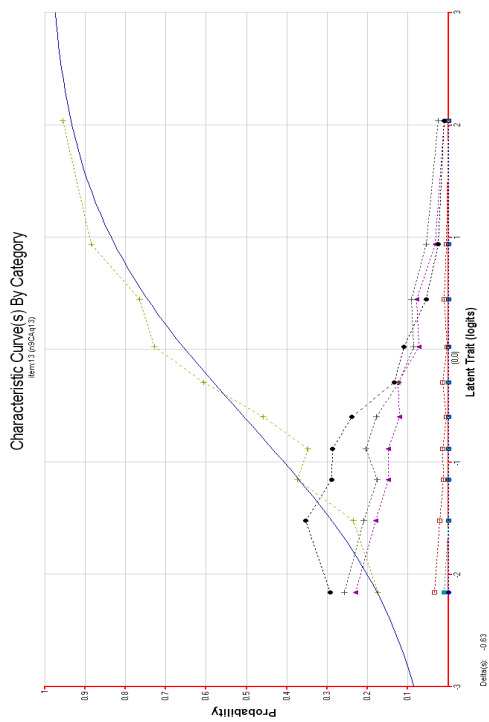
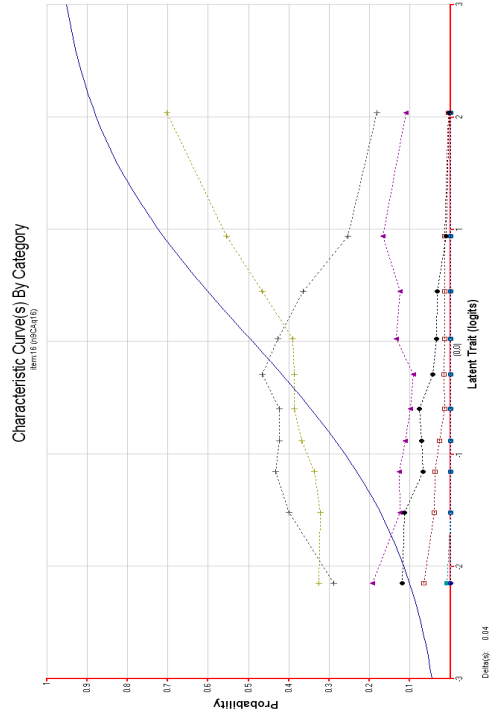
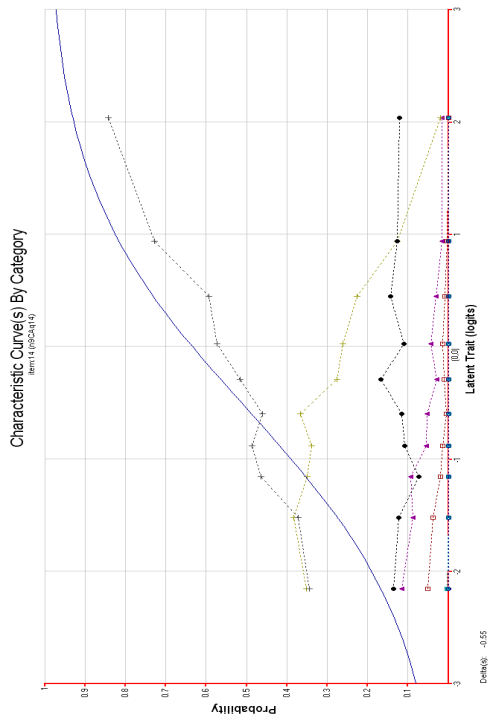


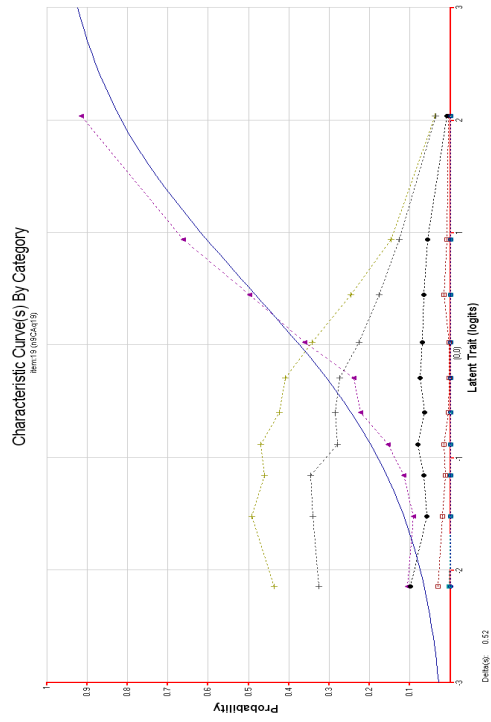
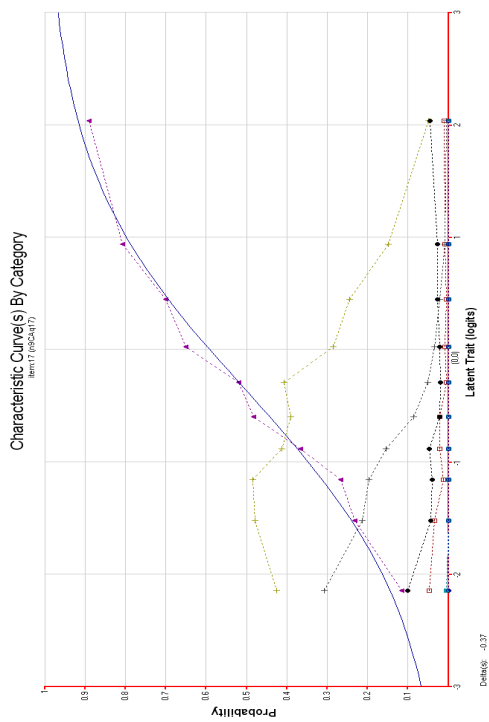
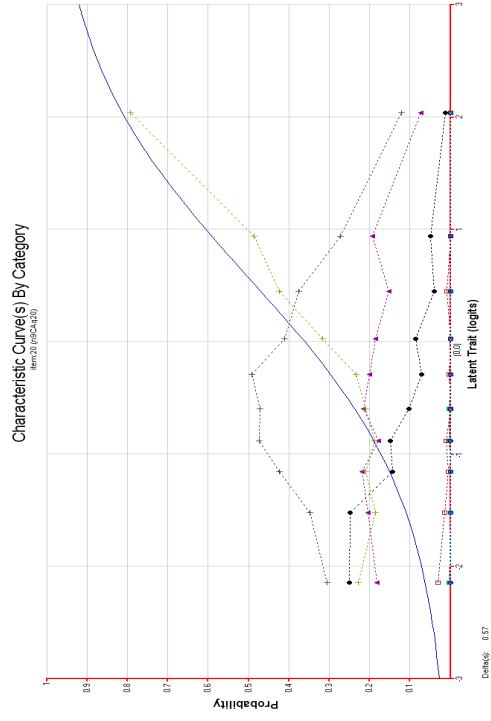
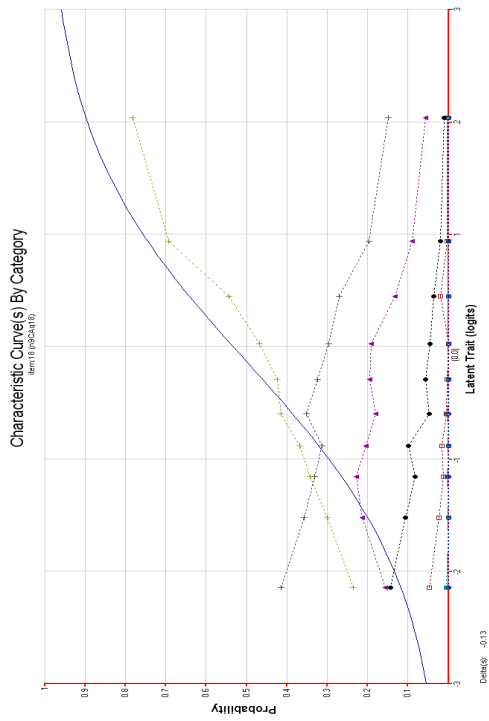
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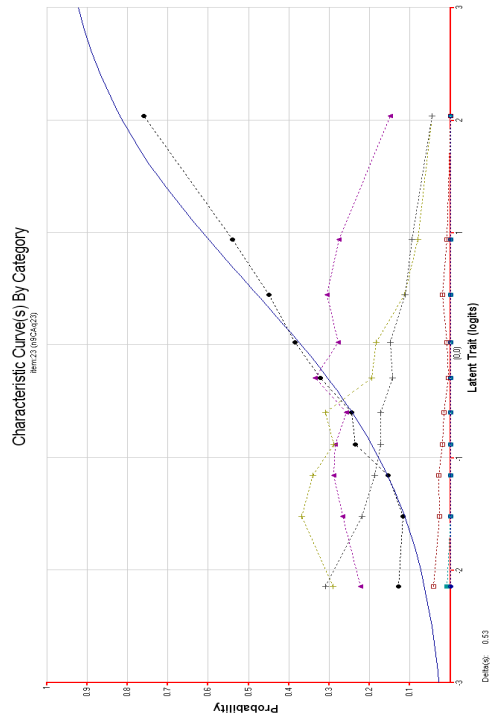
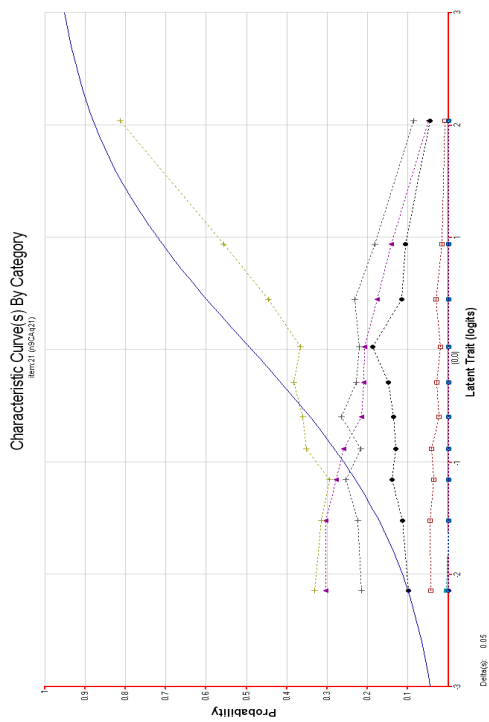
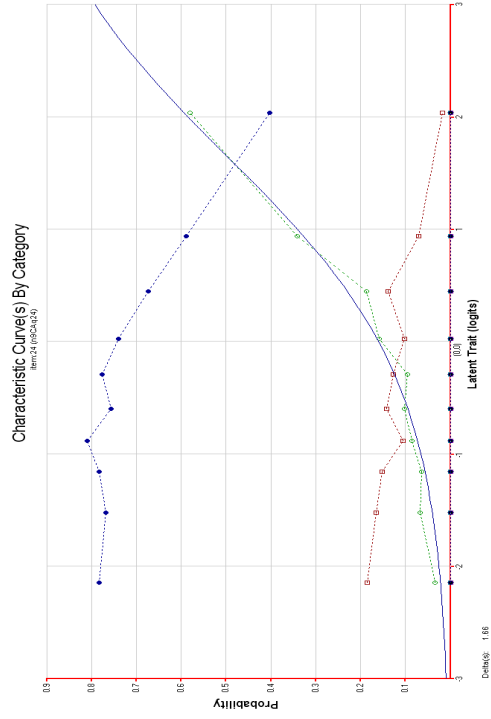
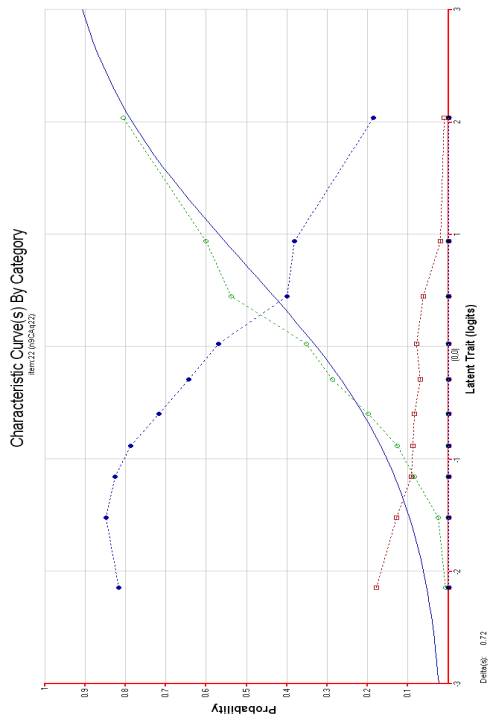


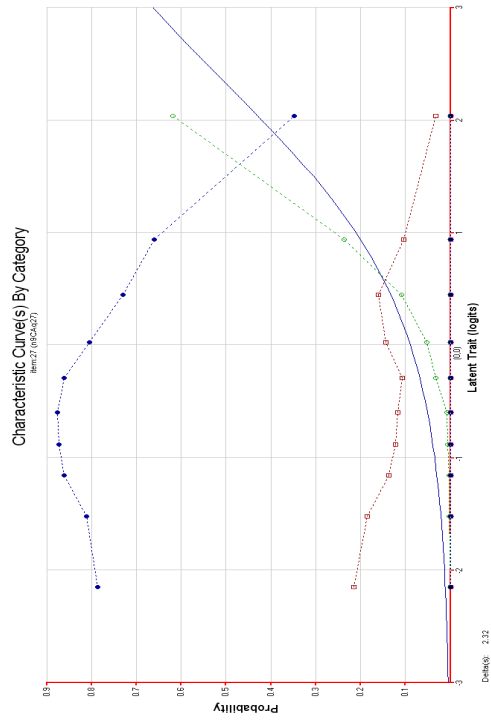
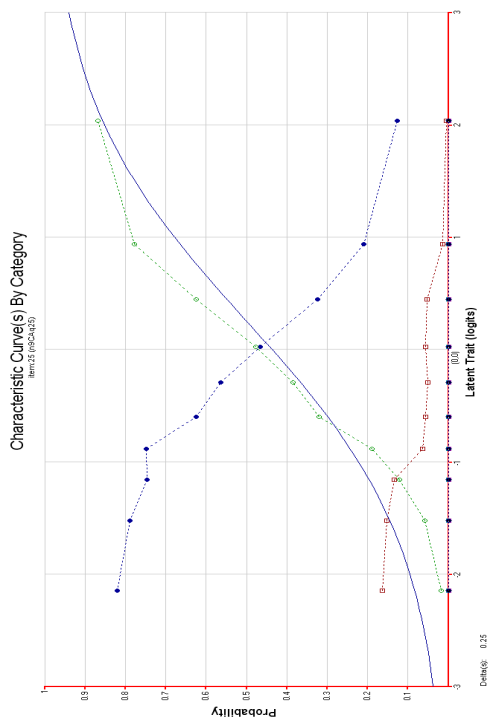
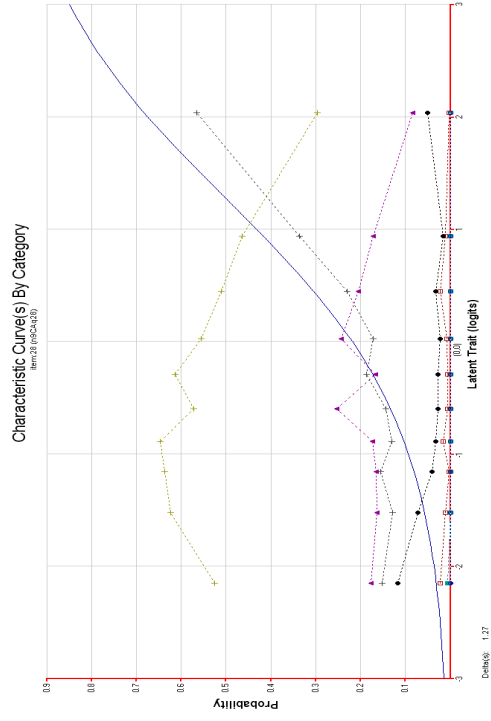
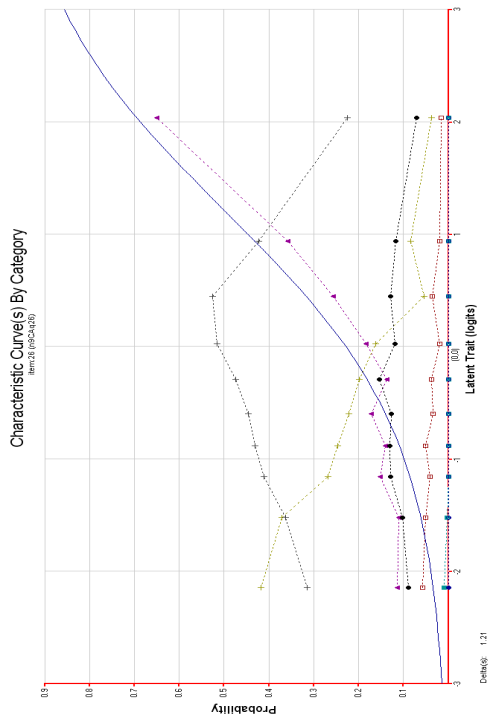


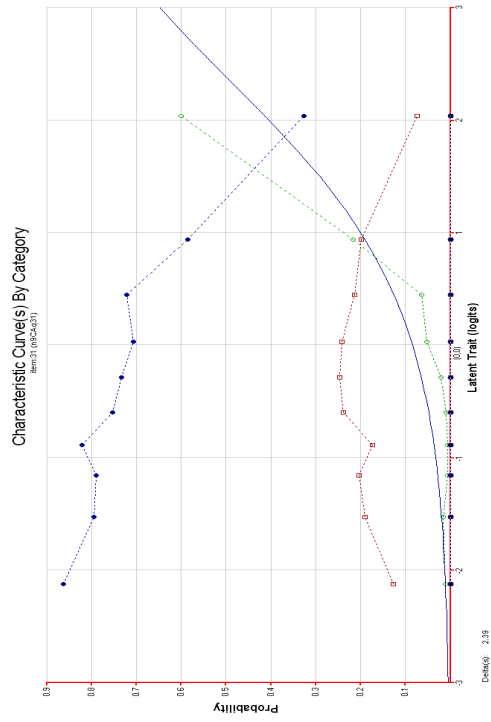
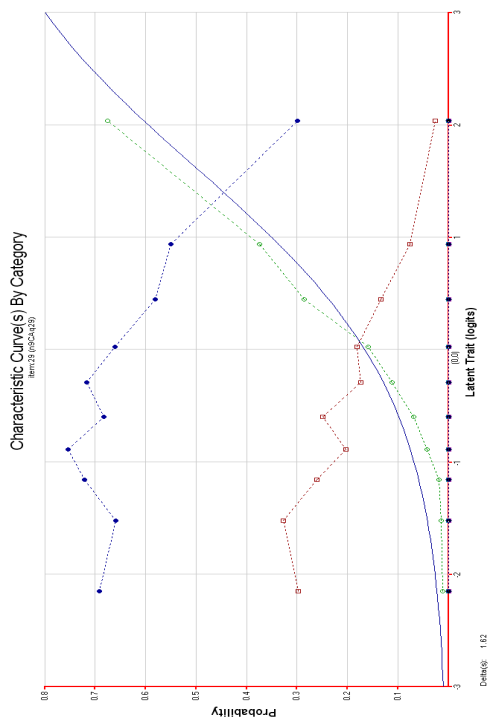
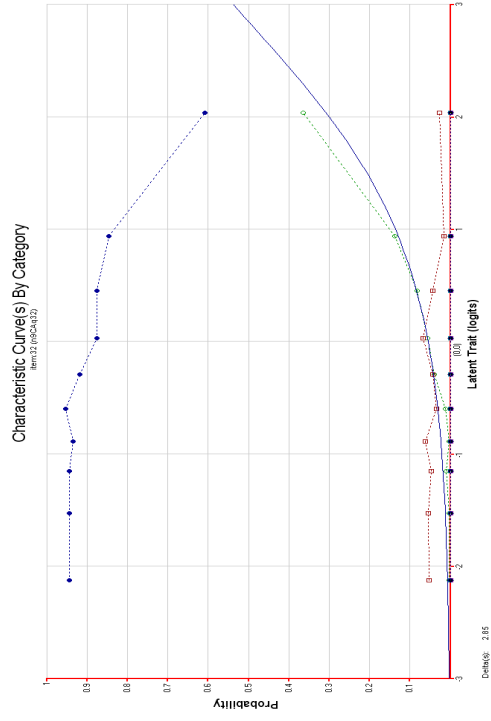
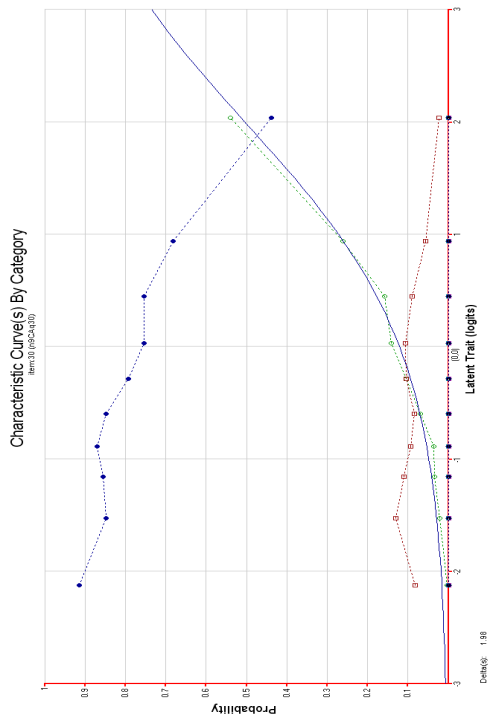


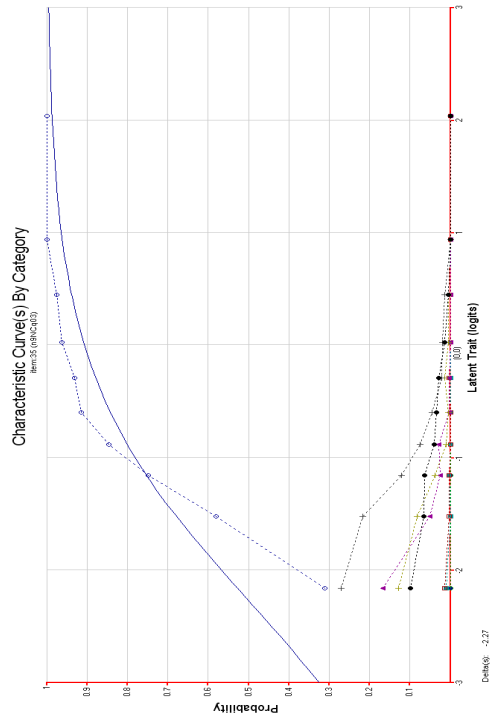
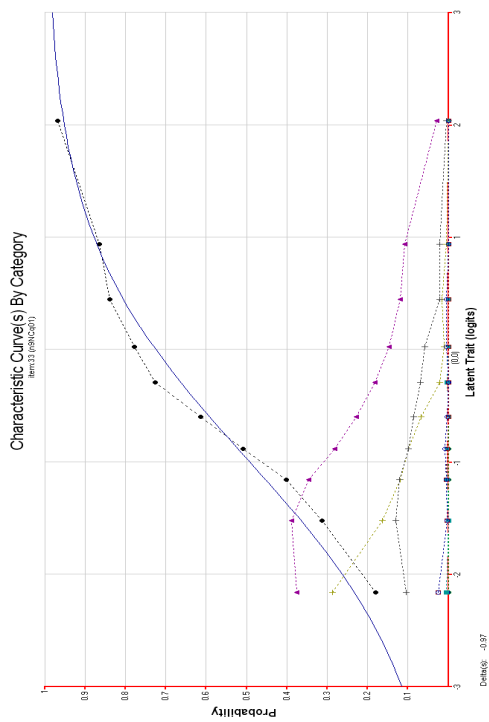
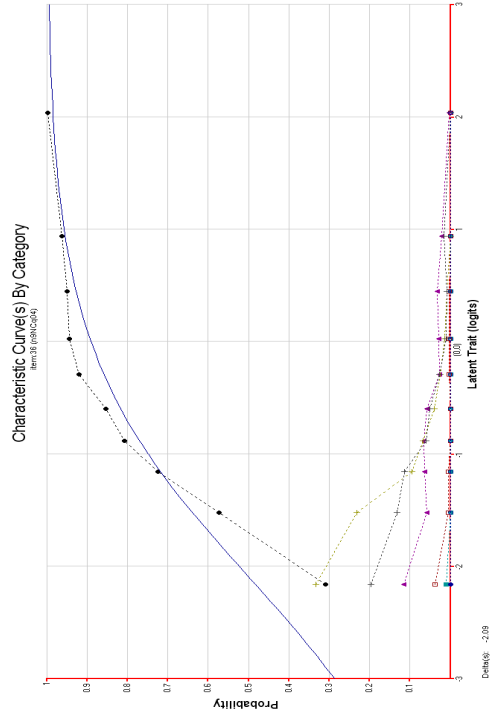
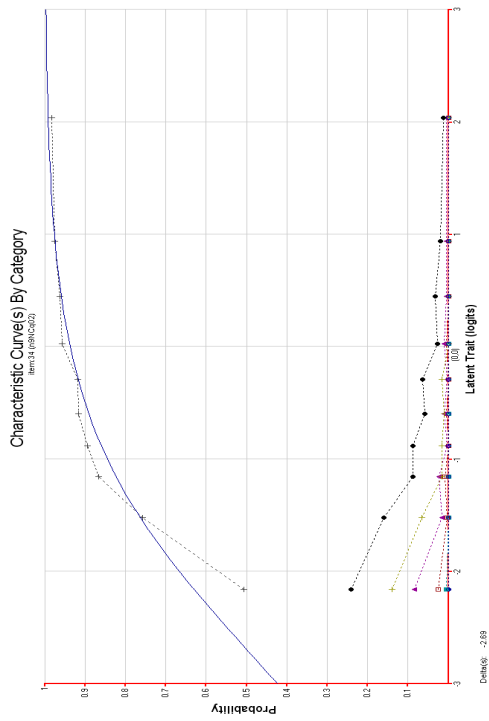


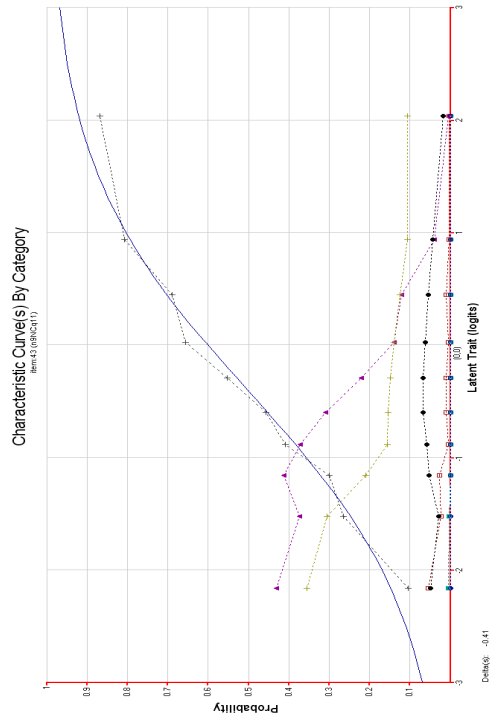
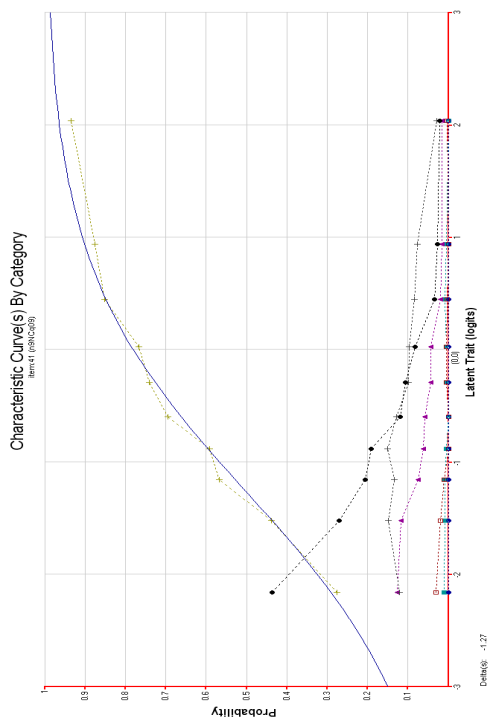
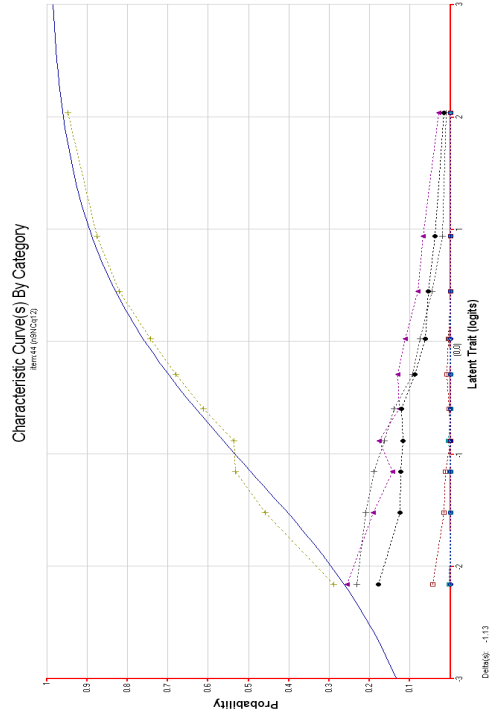
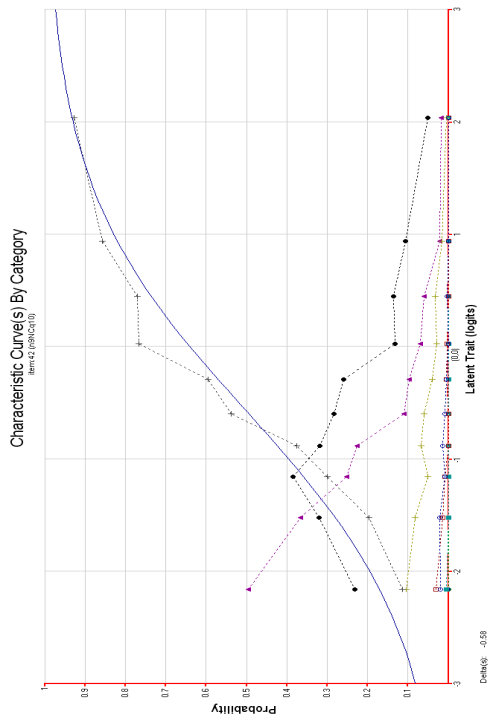


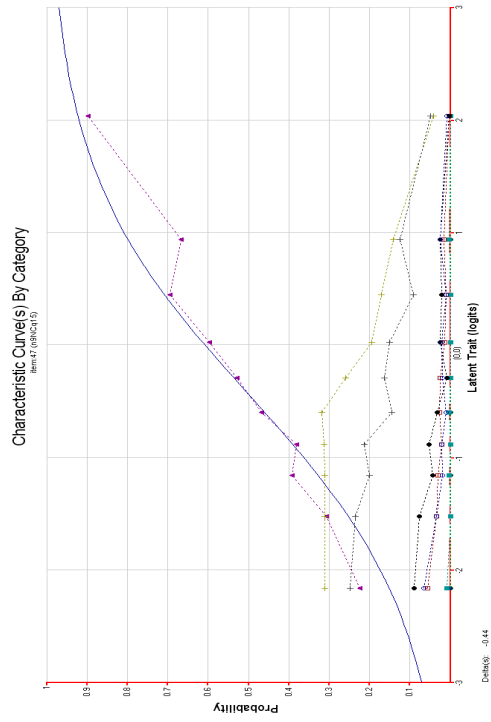
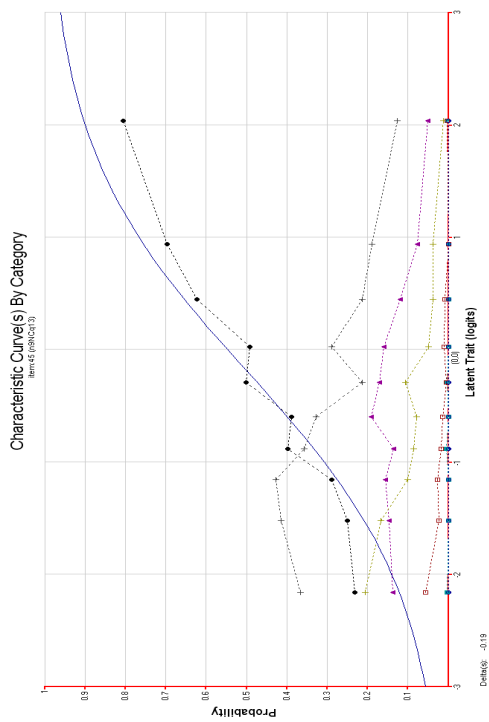
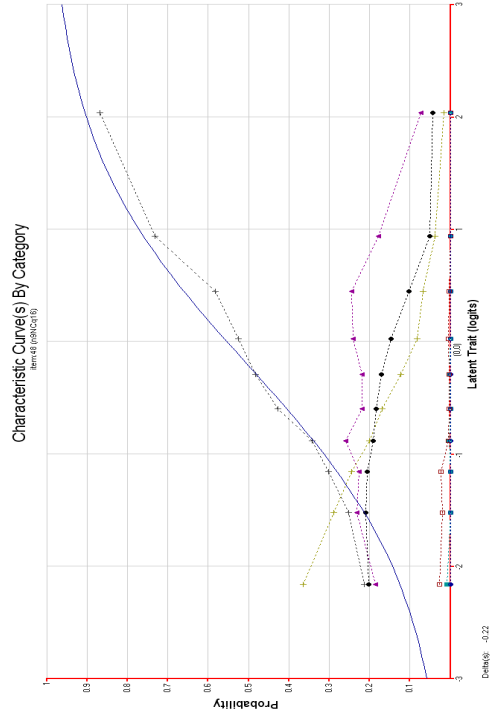
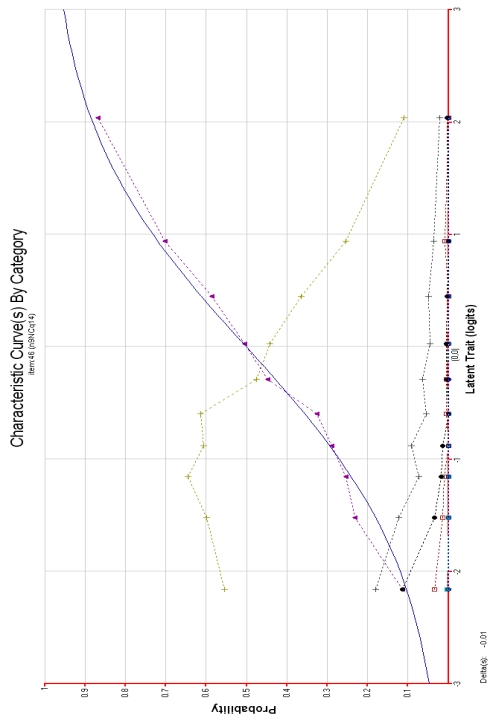


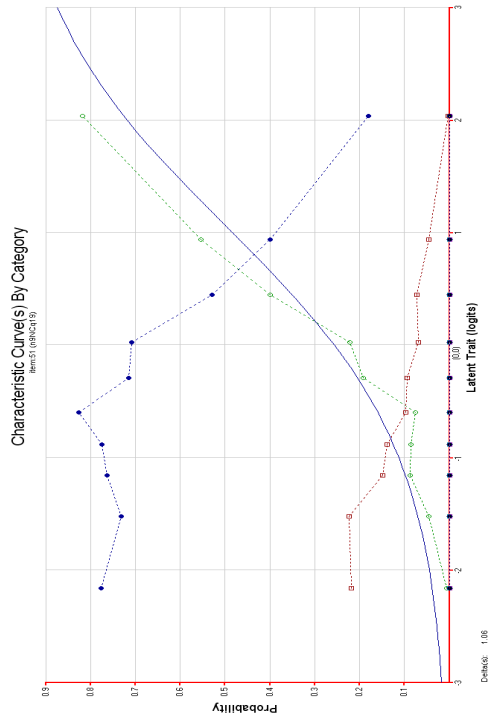
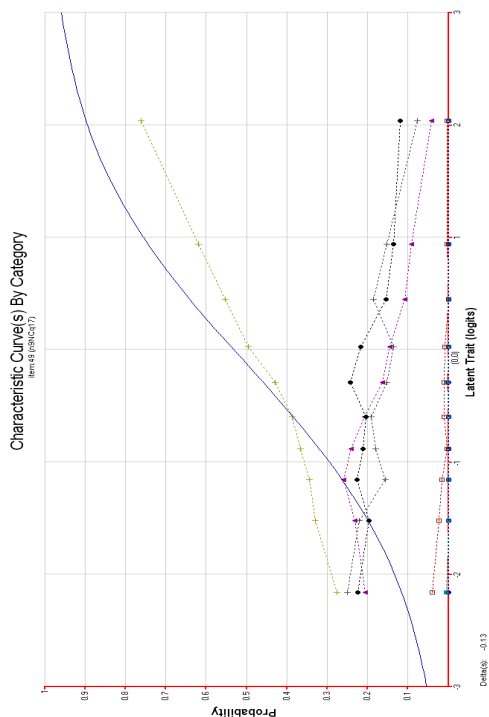
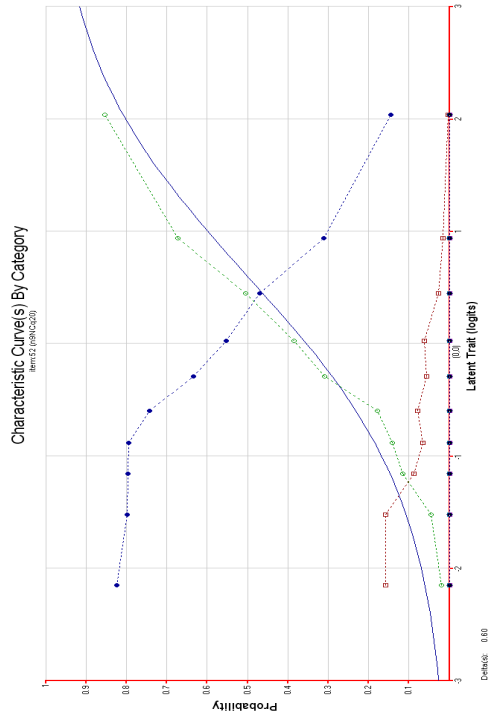
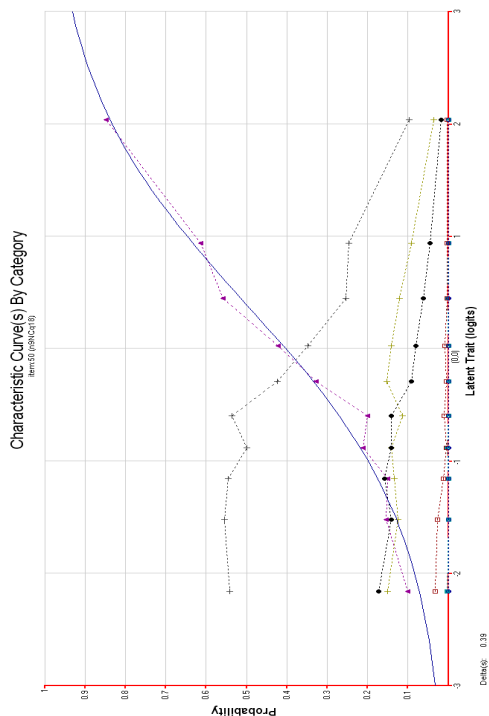


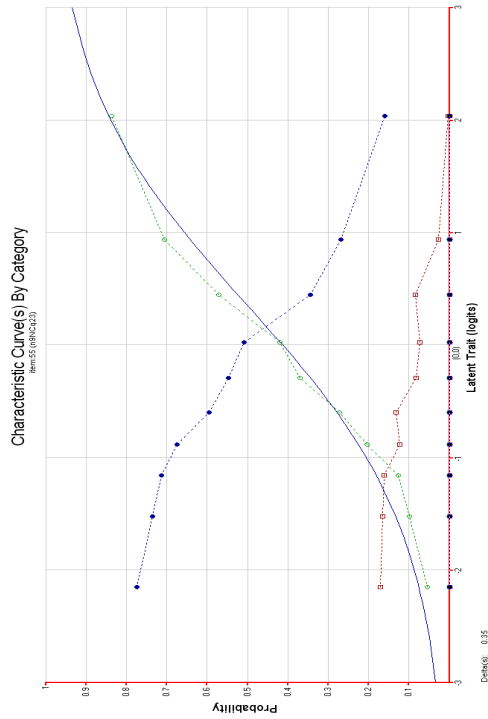
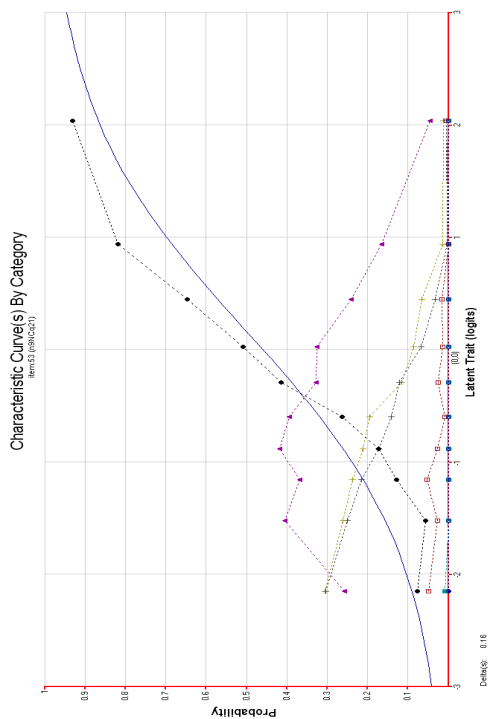
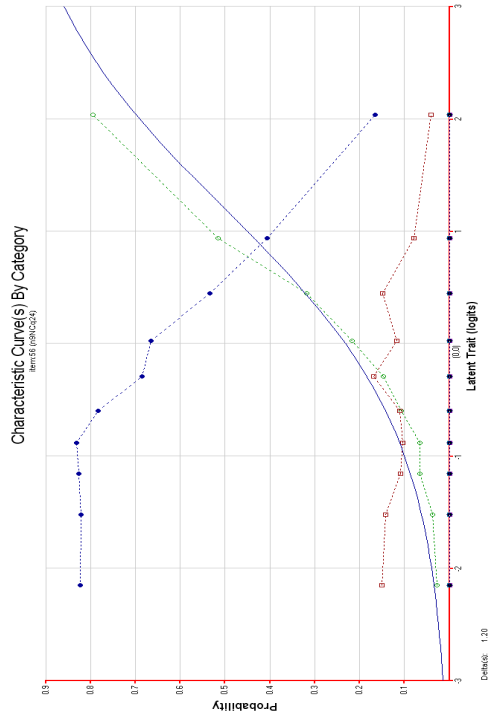
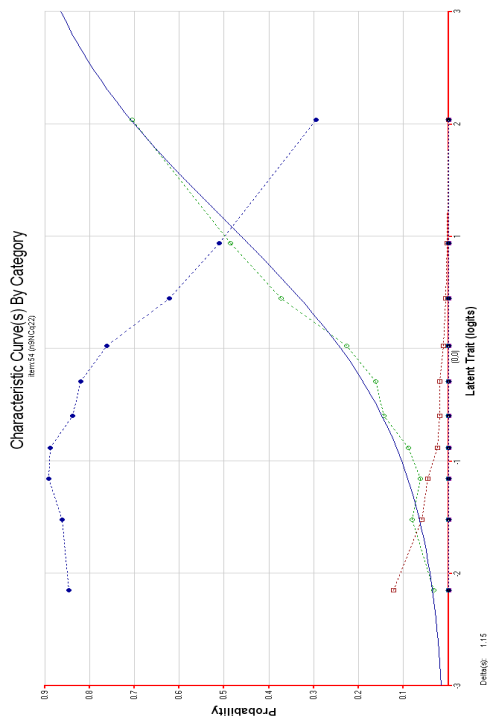


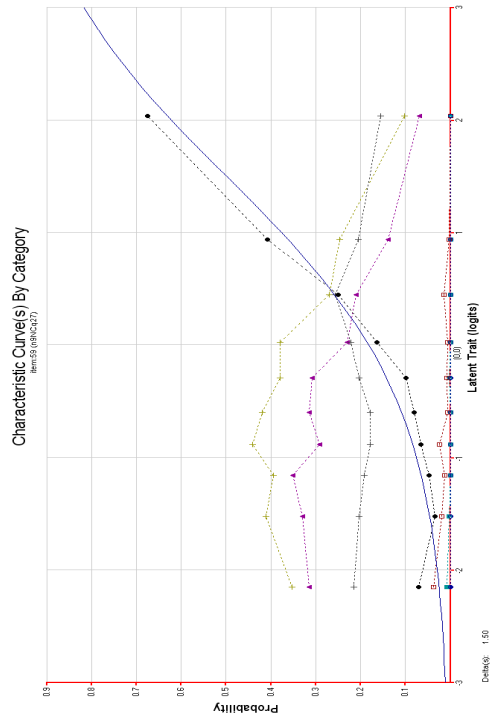
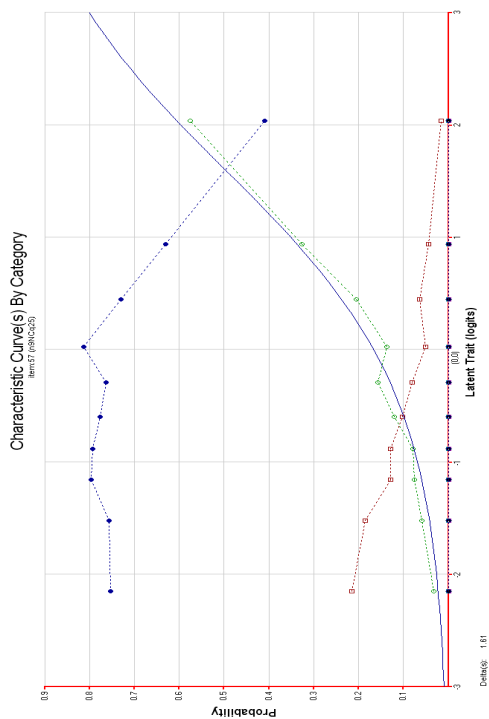
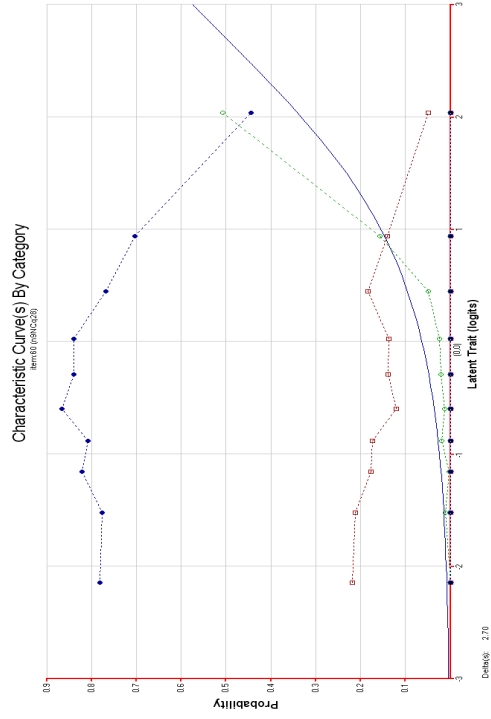
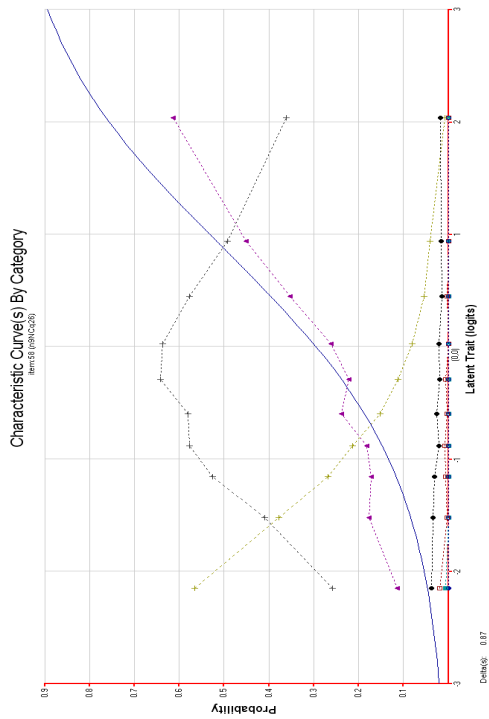












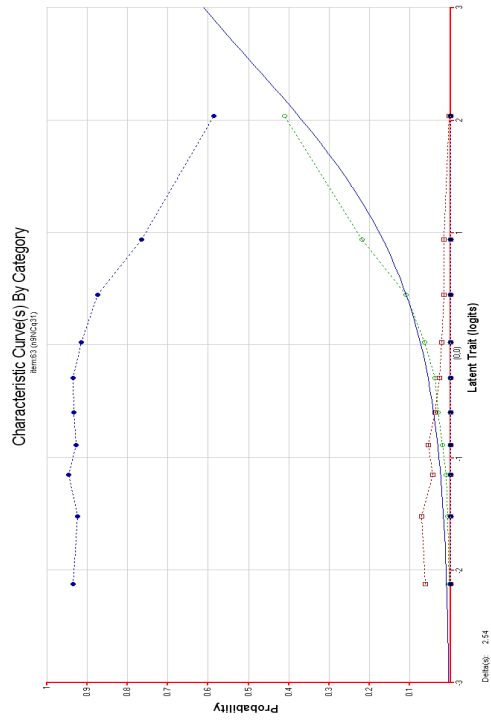
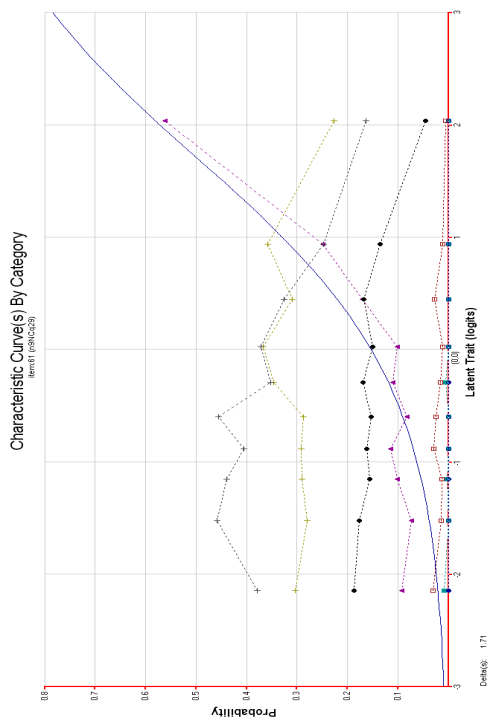
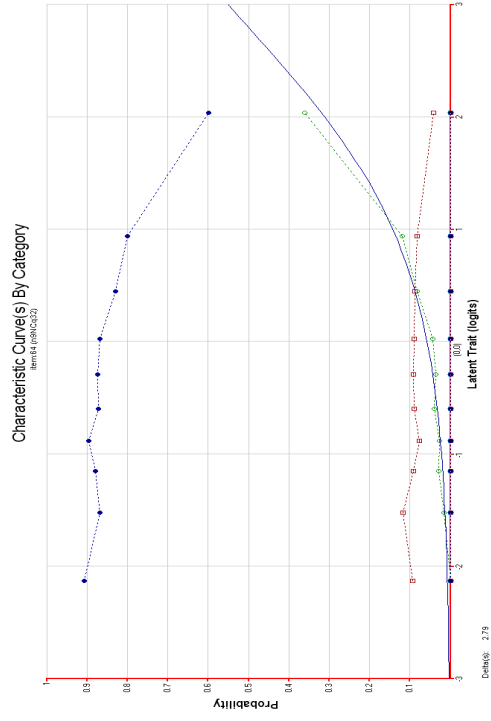
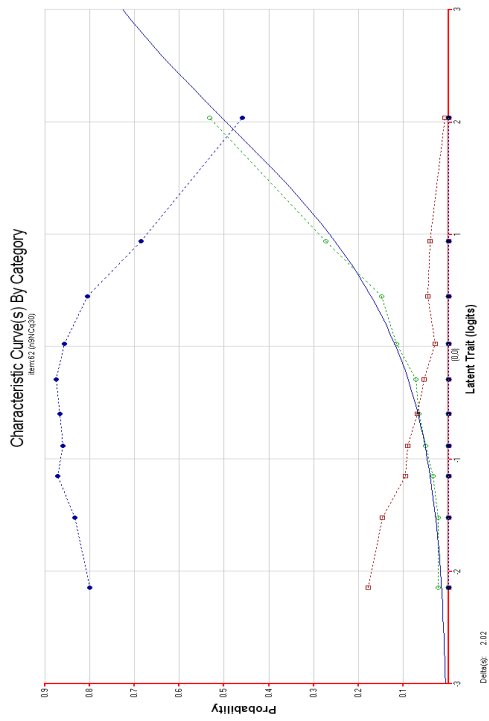


FIGURE E.3 Year 7 Reading Variable Map

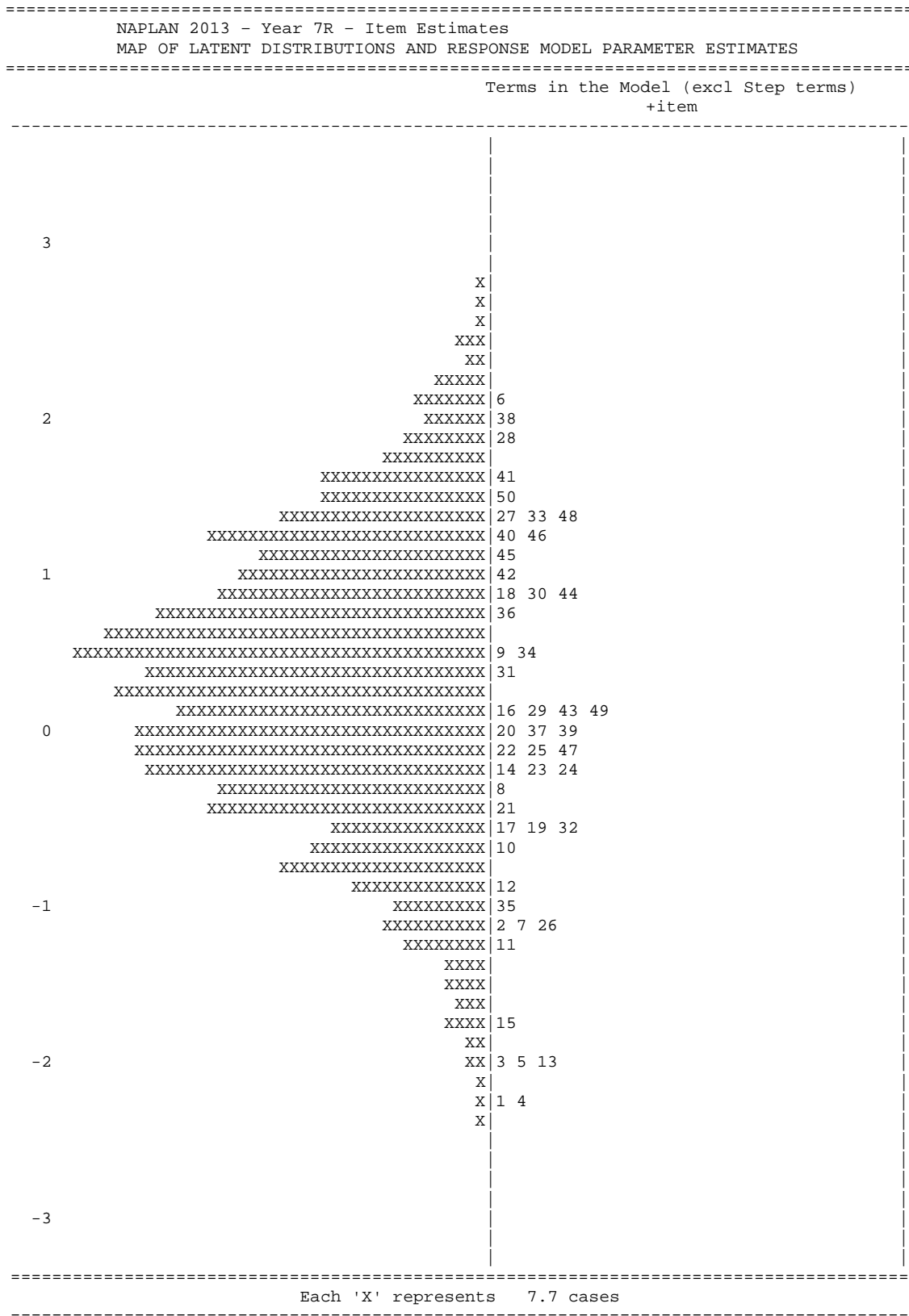


FIGURE E.5 Years 3, 5, 7 and 9 Writing Variable Map

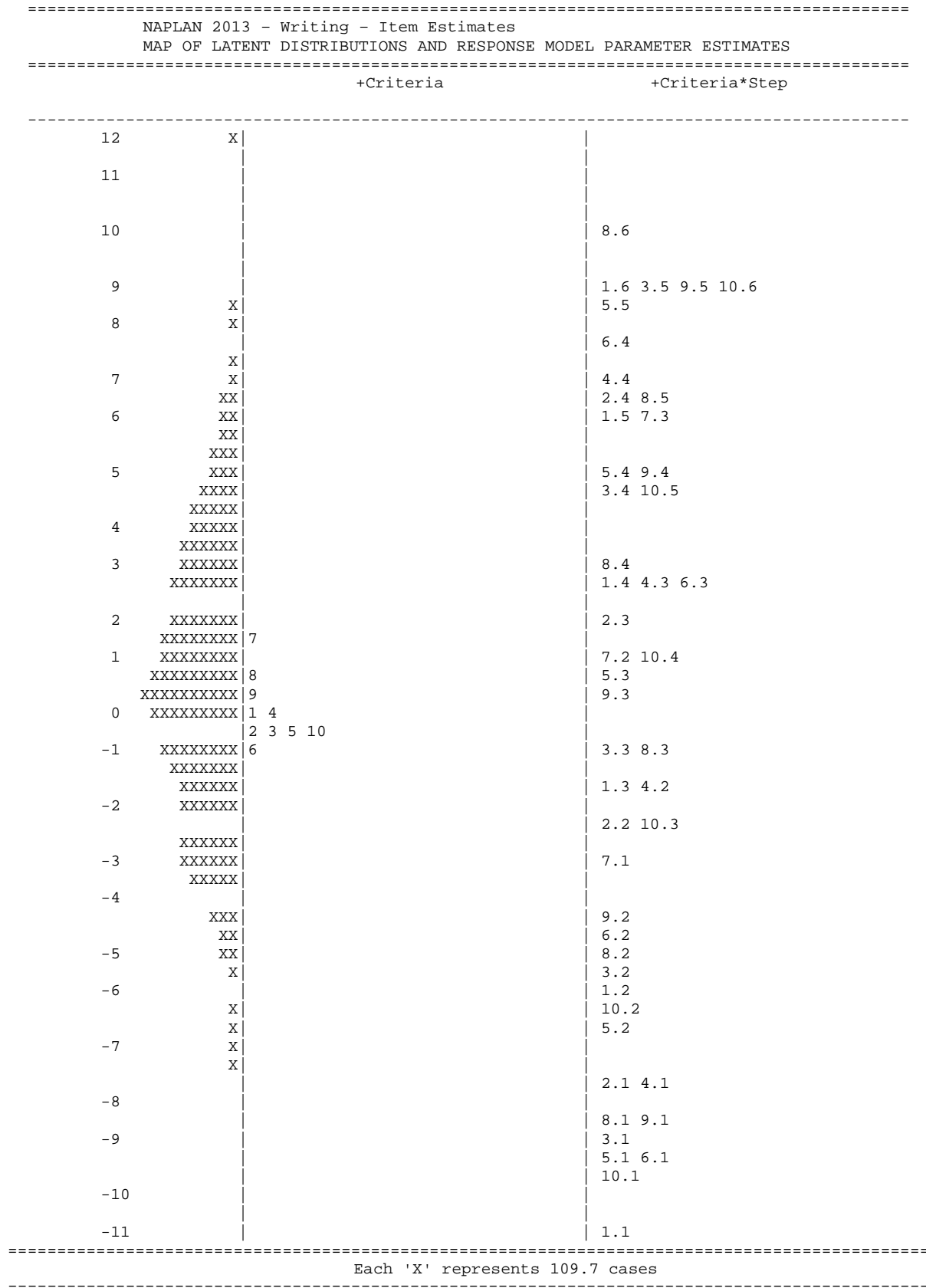


FIGURE E.6 Year 3 Spelling Variable Map

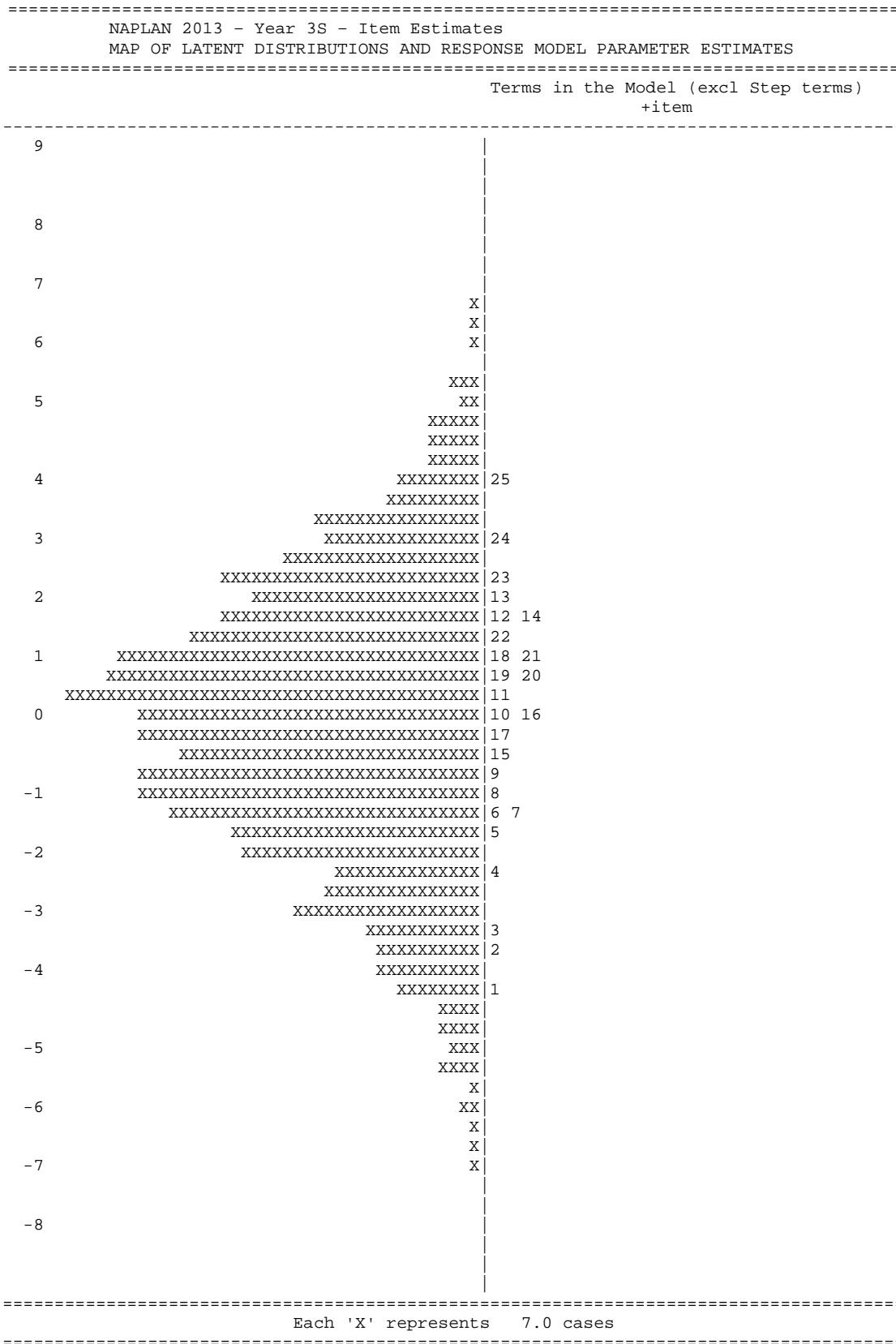


FIGURE E.7 Year 5 Spelling Variable Map

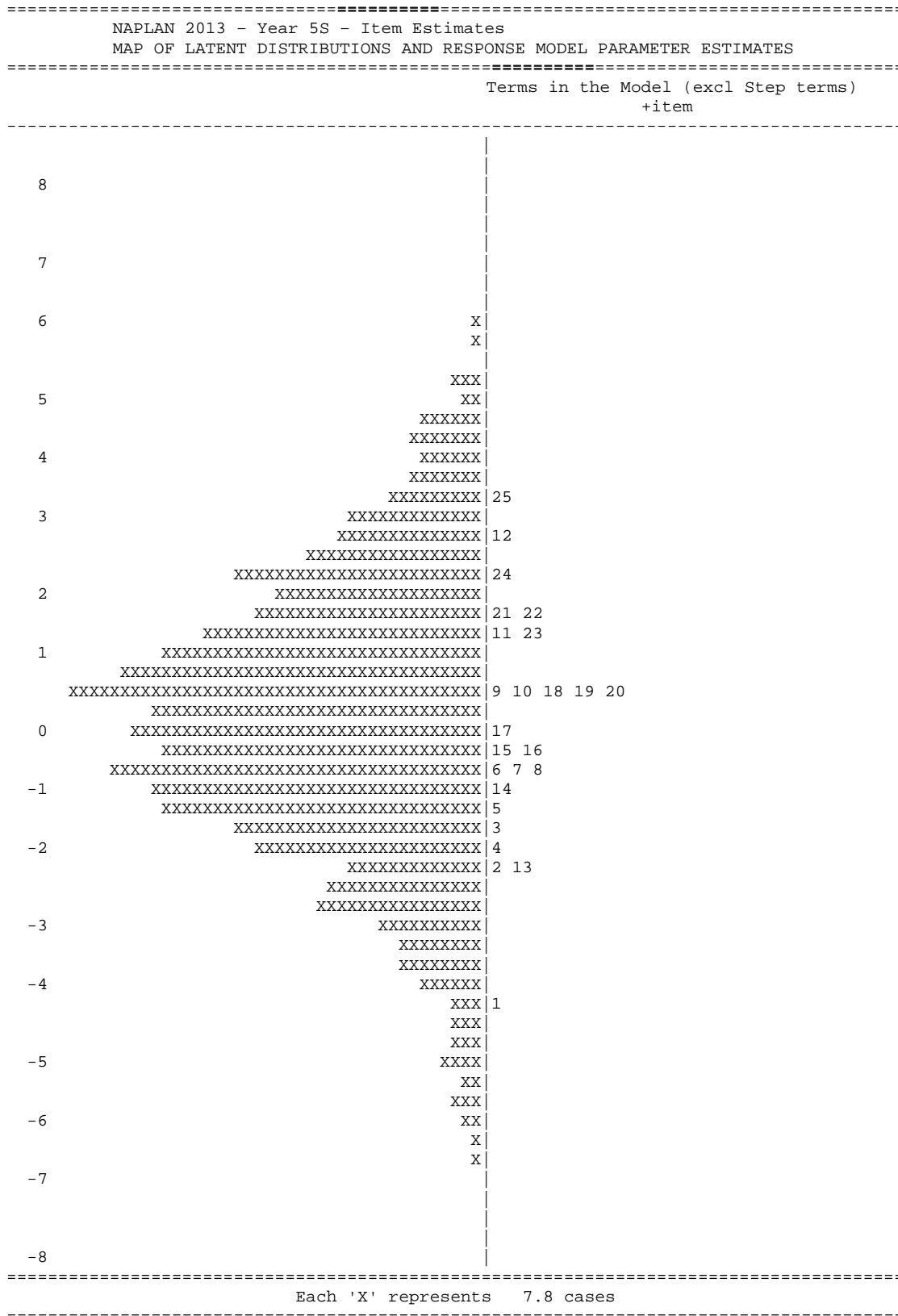


FIGURE E.8 Year 7 Spelling Variable Map



FIGURE E.9 Year 9 Spelling Variable Map

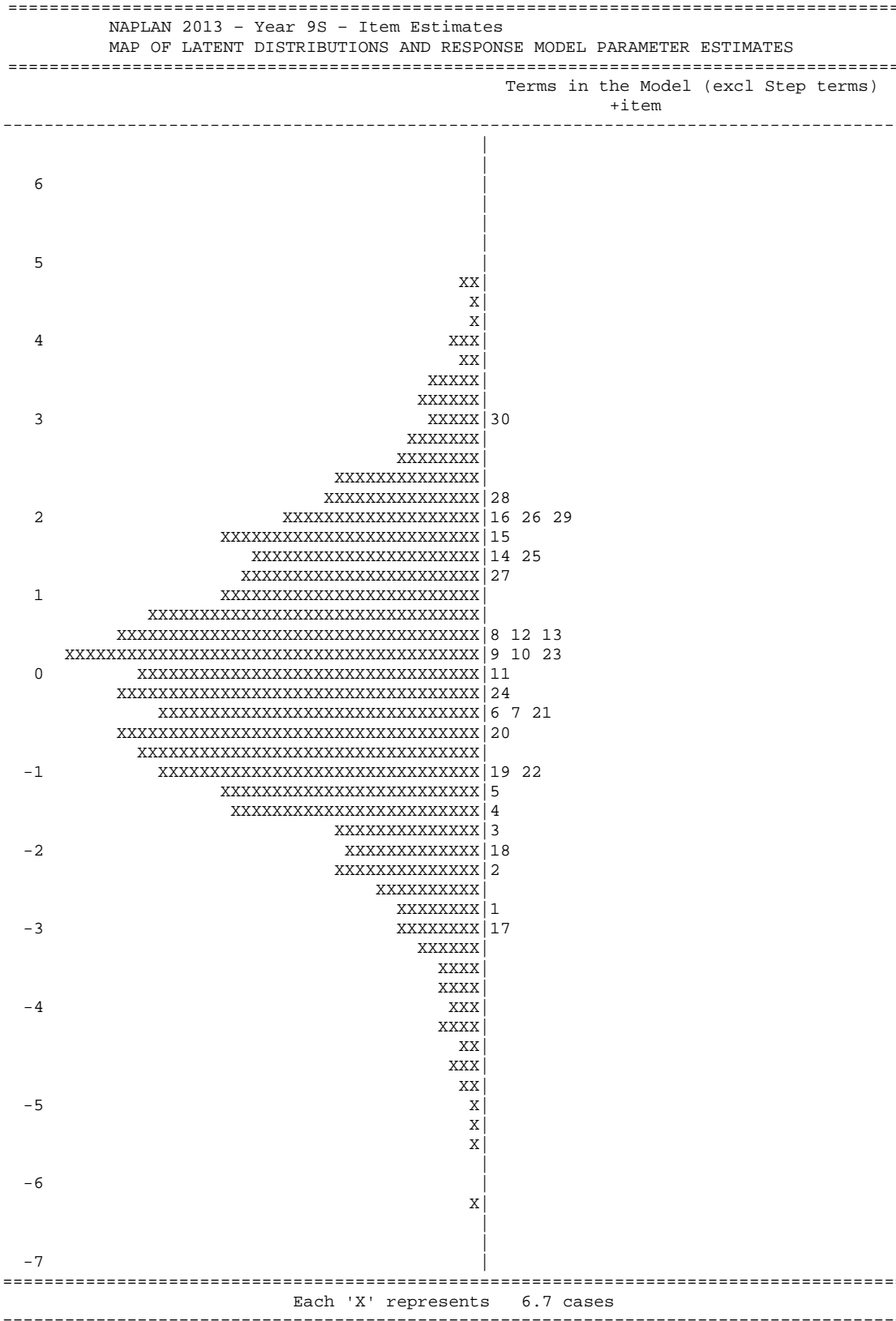


FIGURE E.10 Year 3 Grammar and Punctuation Variable Map

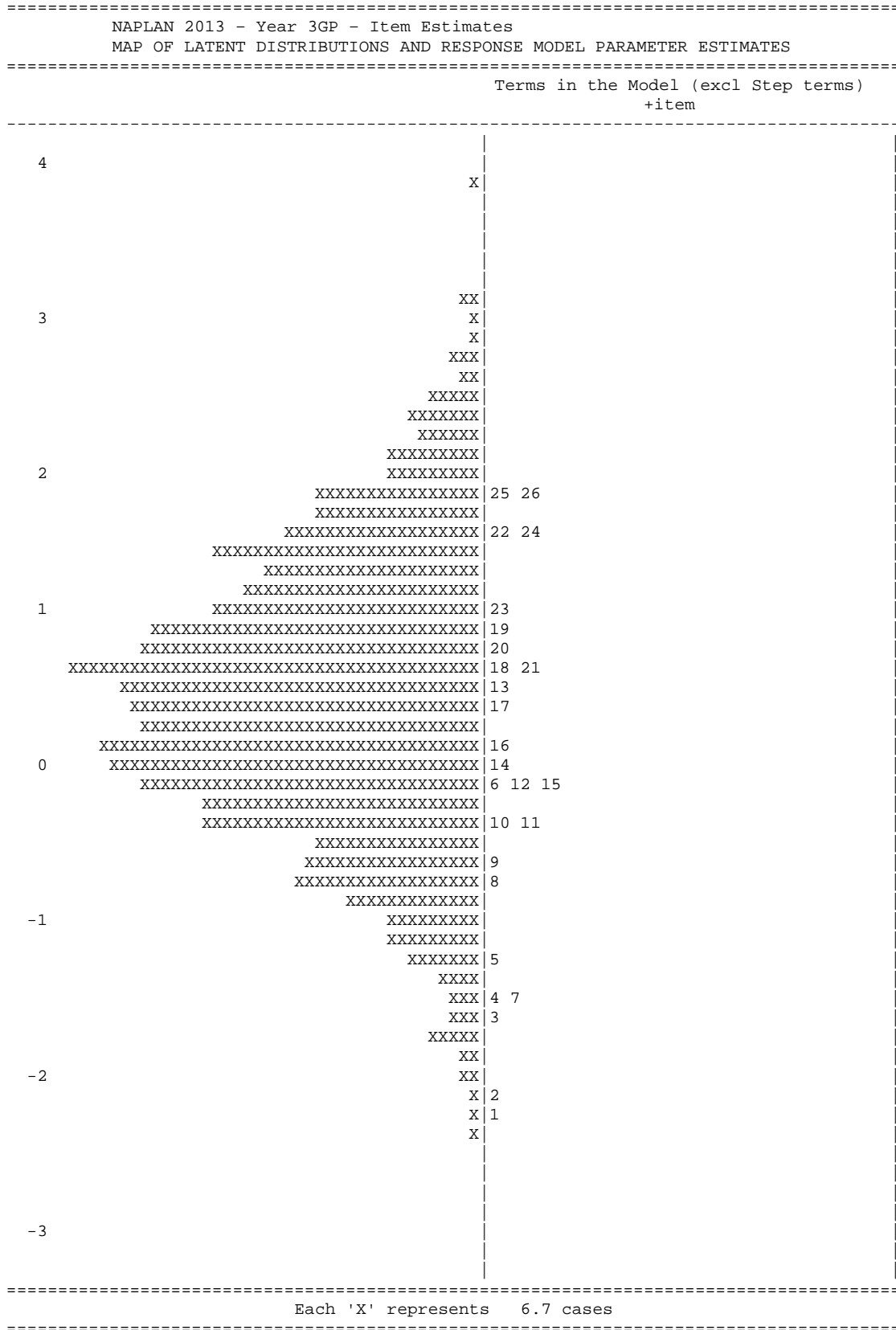


FIGURE E.11 Year 5 Grammar and Punctuation Variable Map



FIGURE E.12 Year 7 Grammar and Punctuation Variable Map

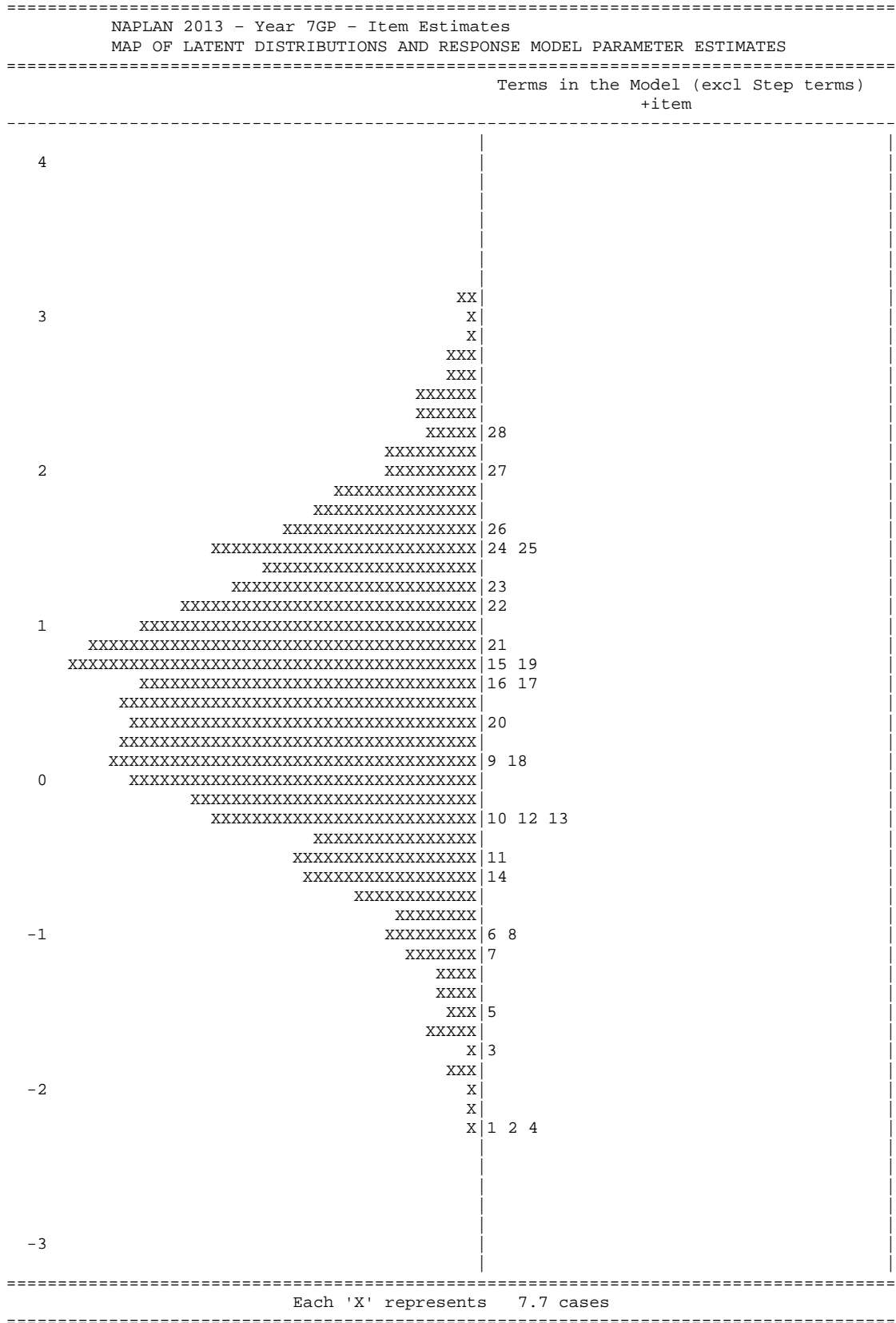


FIGURE E.13 Year 9 Grammar and Punctuation Variable Map



FIGURE E.14 Year 3 Numeracy Variable Map



FIGURE E.15 Year 5 Numeracy Variable Map



FIGURE E.16 Year 7 Numeracy Variable Map

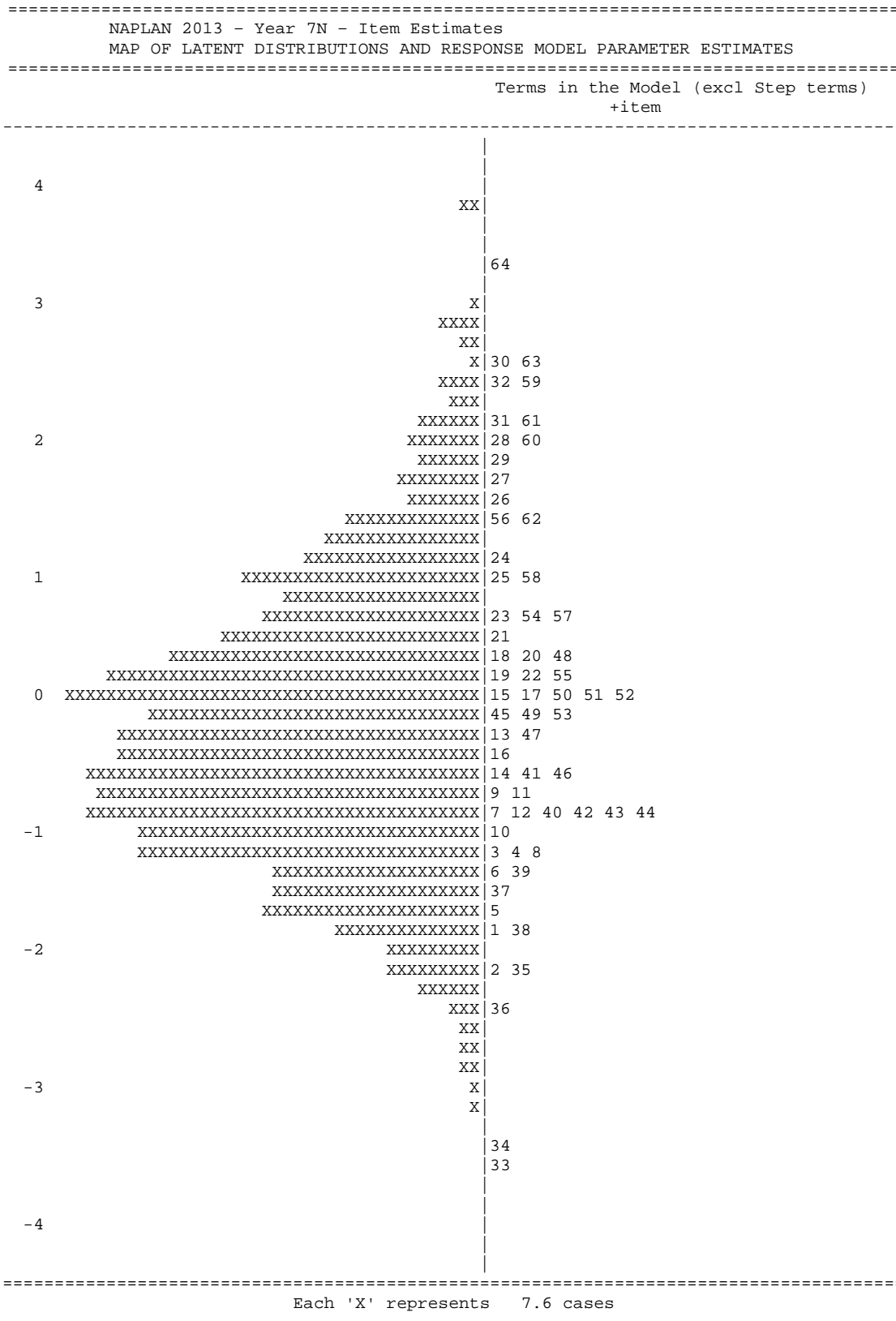
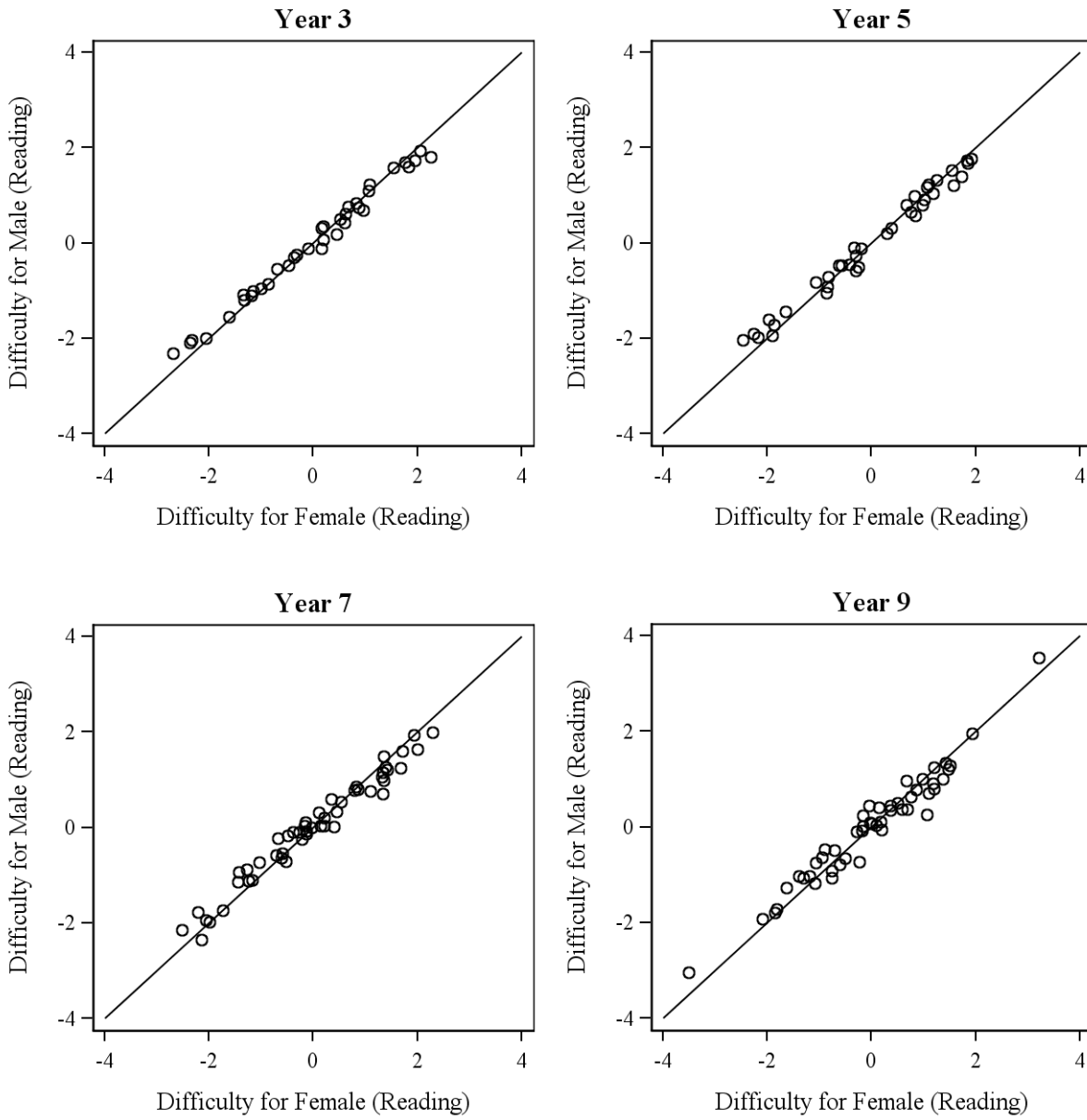


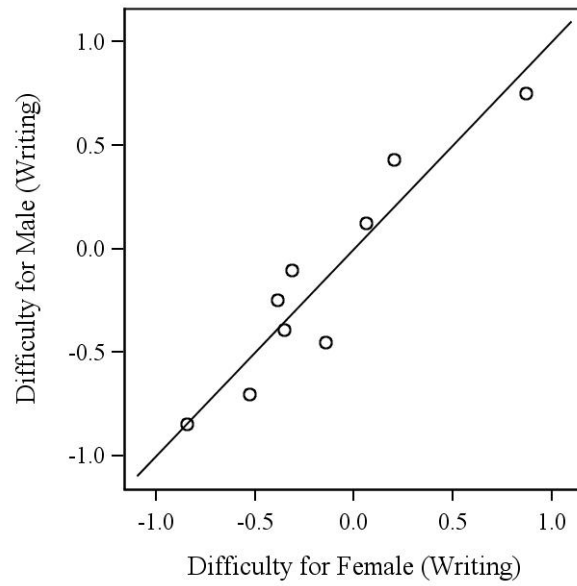
FIGURE E.17 Year 9 Numeracy Variable Map

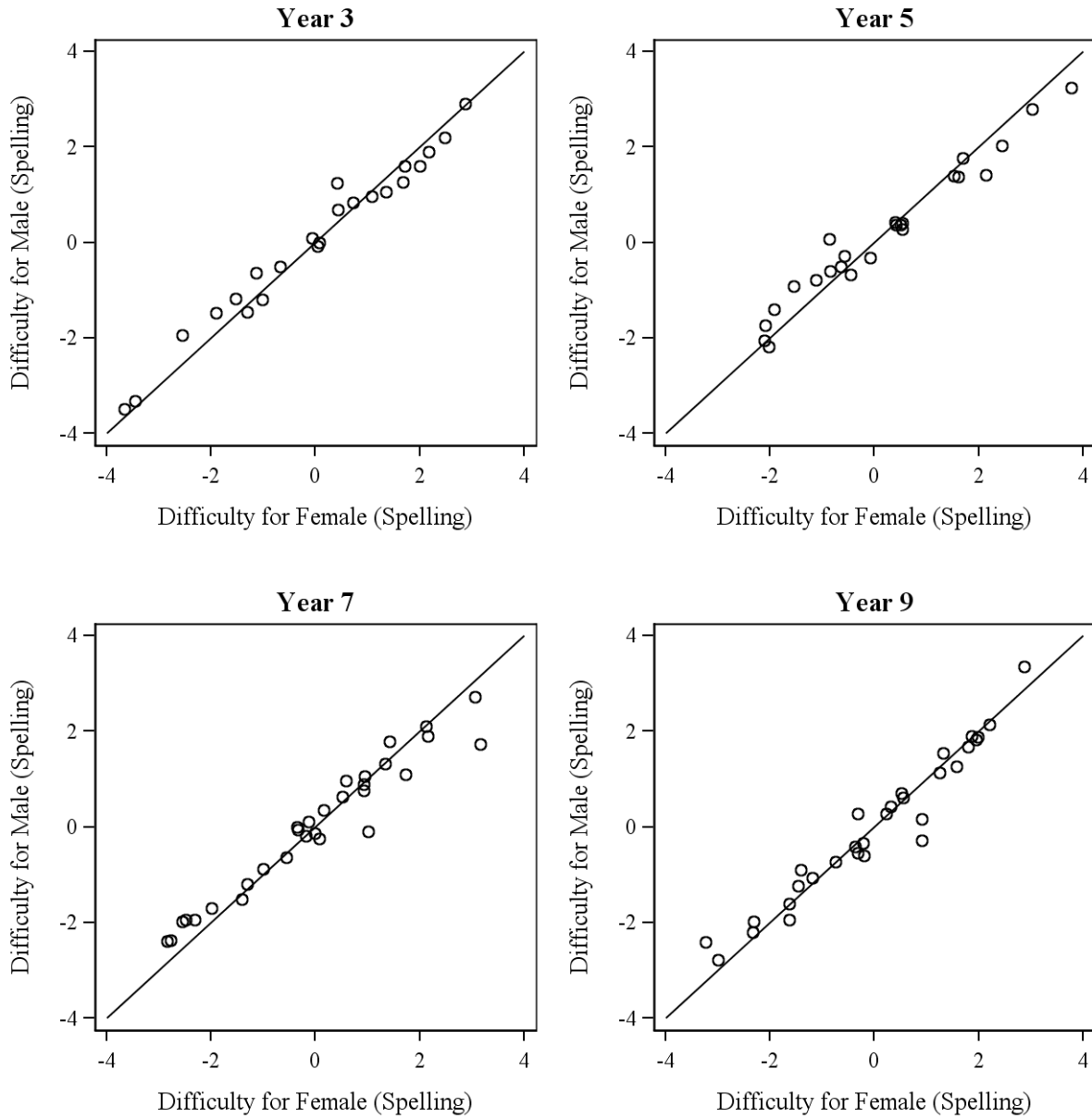


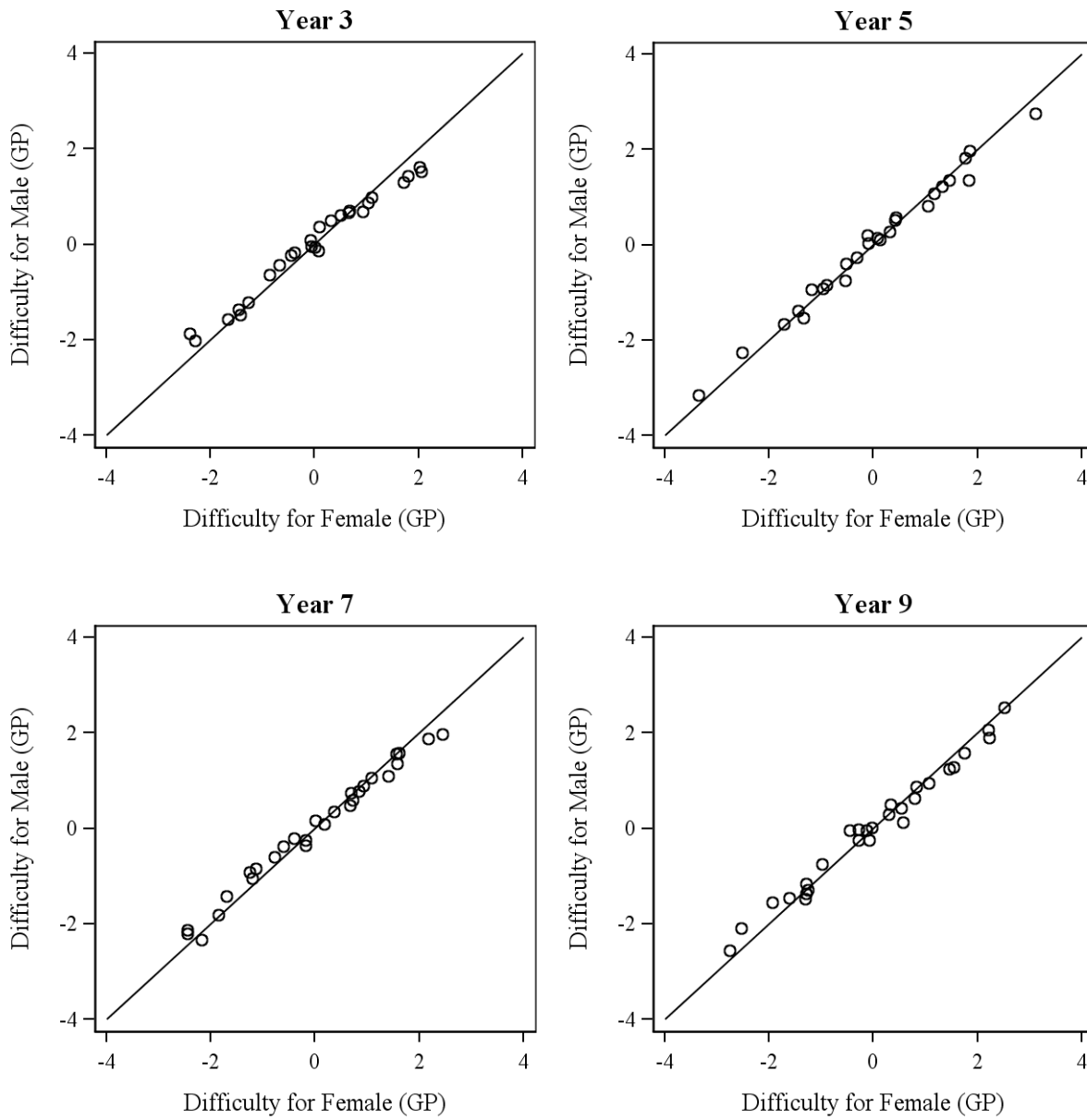
APPENDIX F. GENDER DIF ANALYSIS

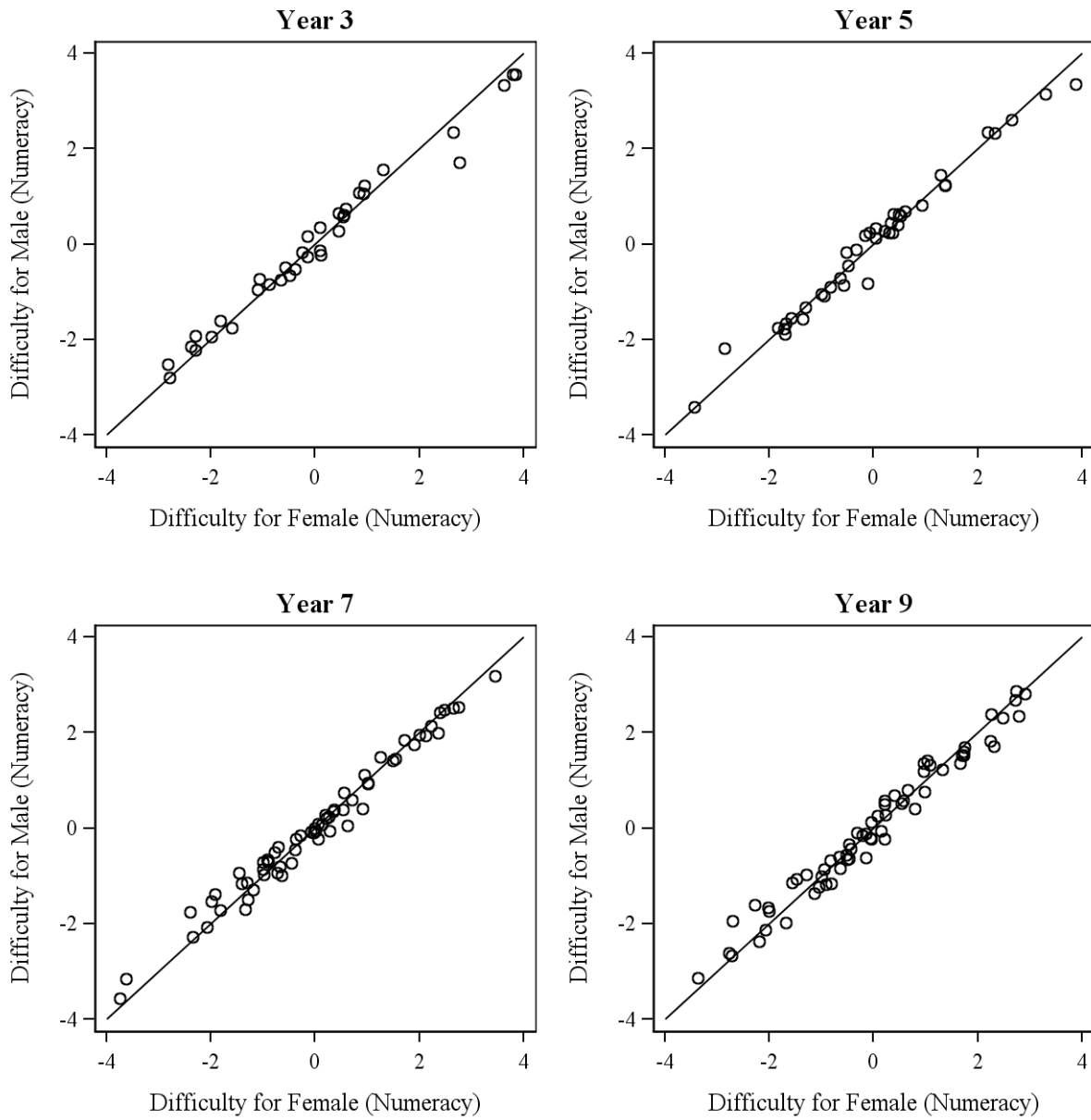
F.1 Centred Item Locations of Male and Female Students in Reading (2013)



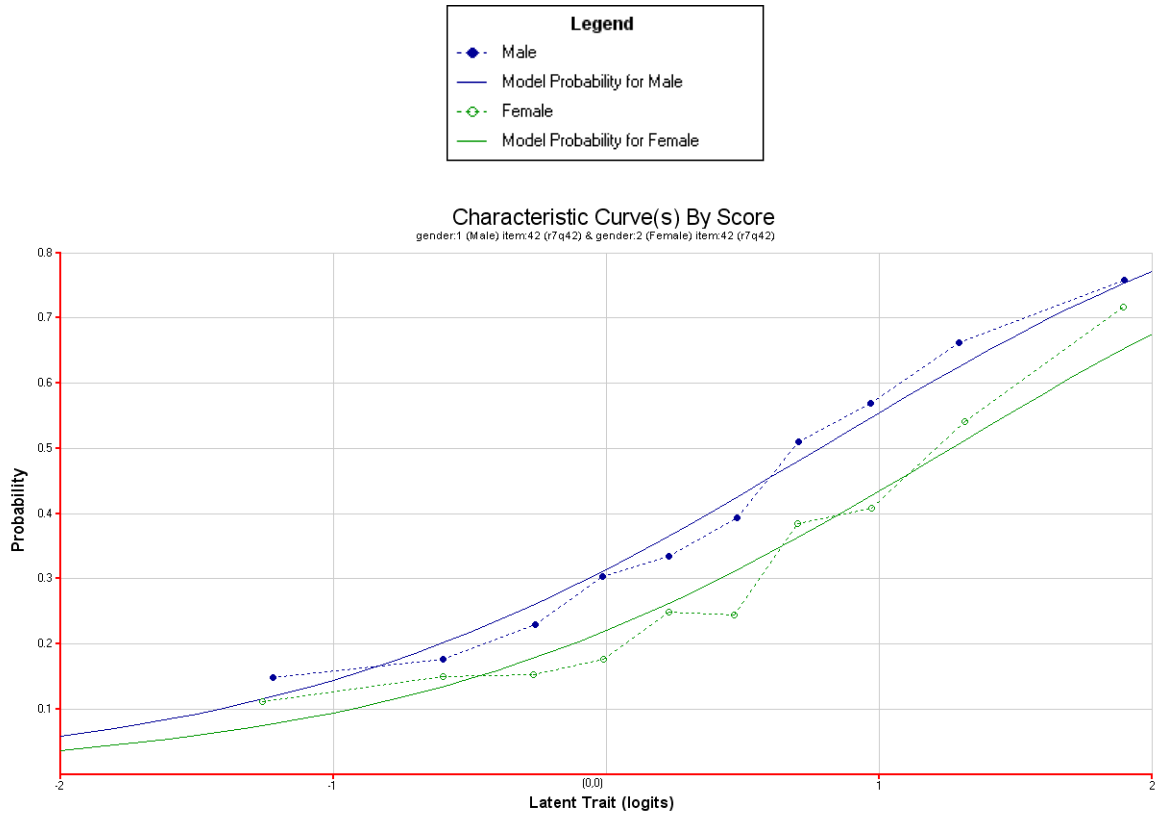
F.2 Centred Item Locations of Male and Female Students Years 3, 5, 7, and 9 Writing (2013)

F.3 Centred Item Locations of Male and Female Students in Spelling (2013)

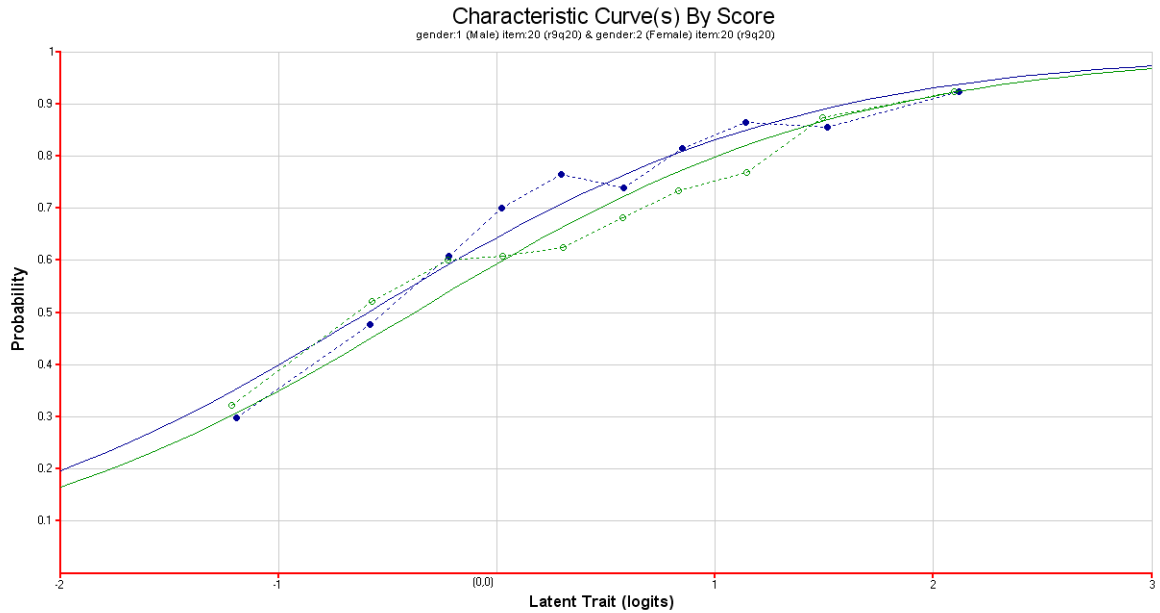
F.4 Centred Item Locations of Male and Female Students in Grammar and Punctuation (2013)

F.5 Centred Item Locations of Male and Female Students in Numeracy (2013)

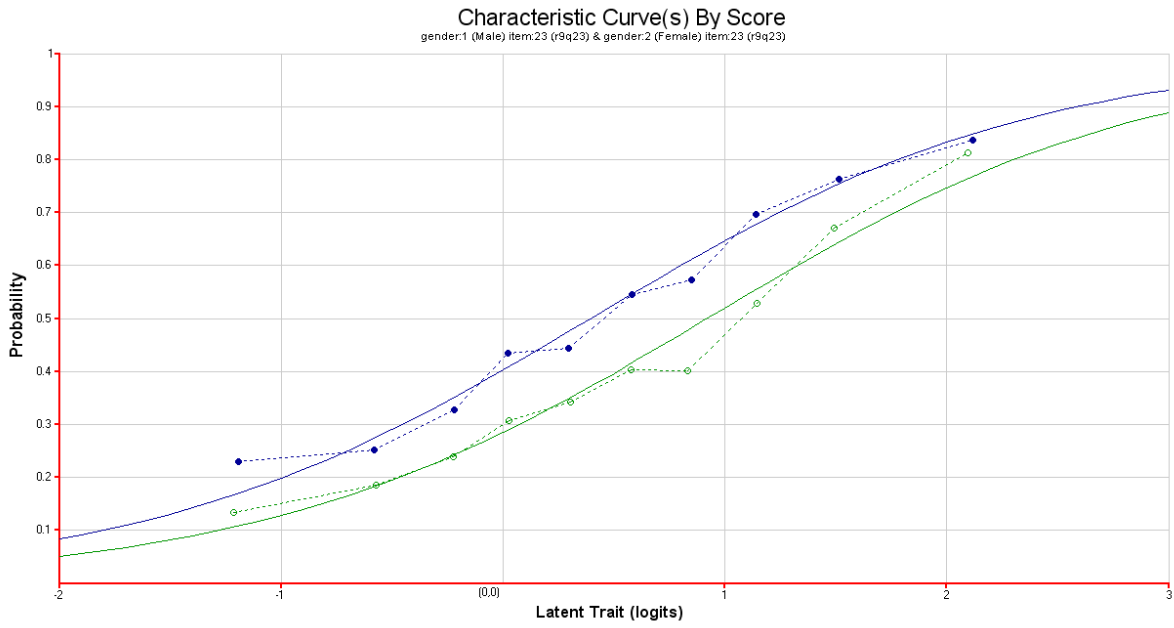
F.6 Item DIF Plots for Items Showing Gender DIF



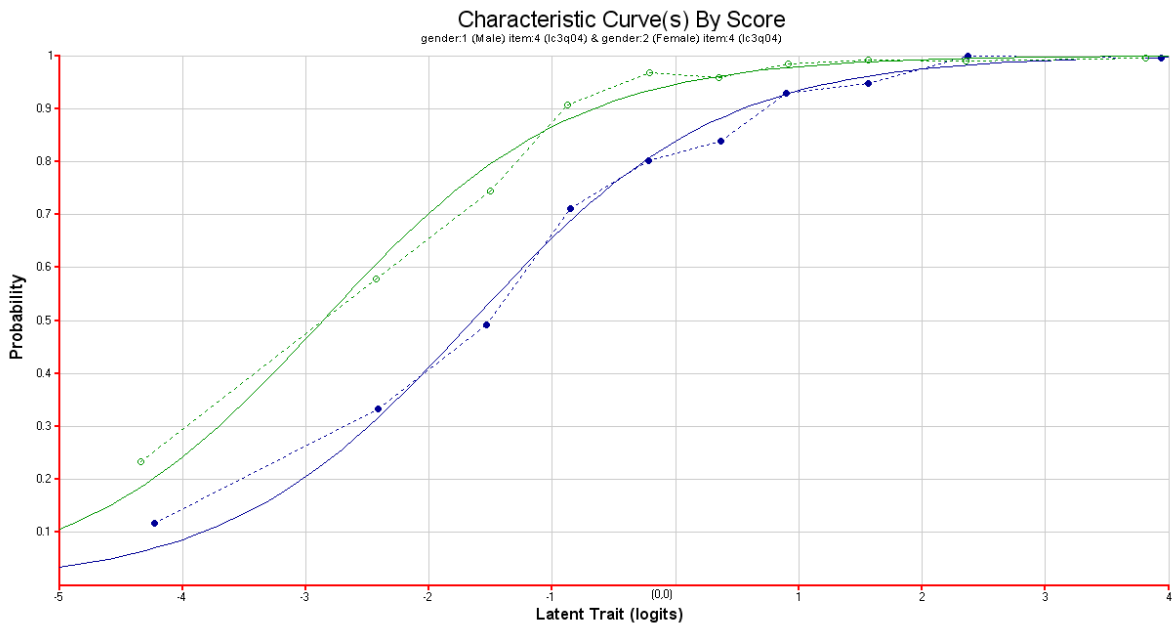
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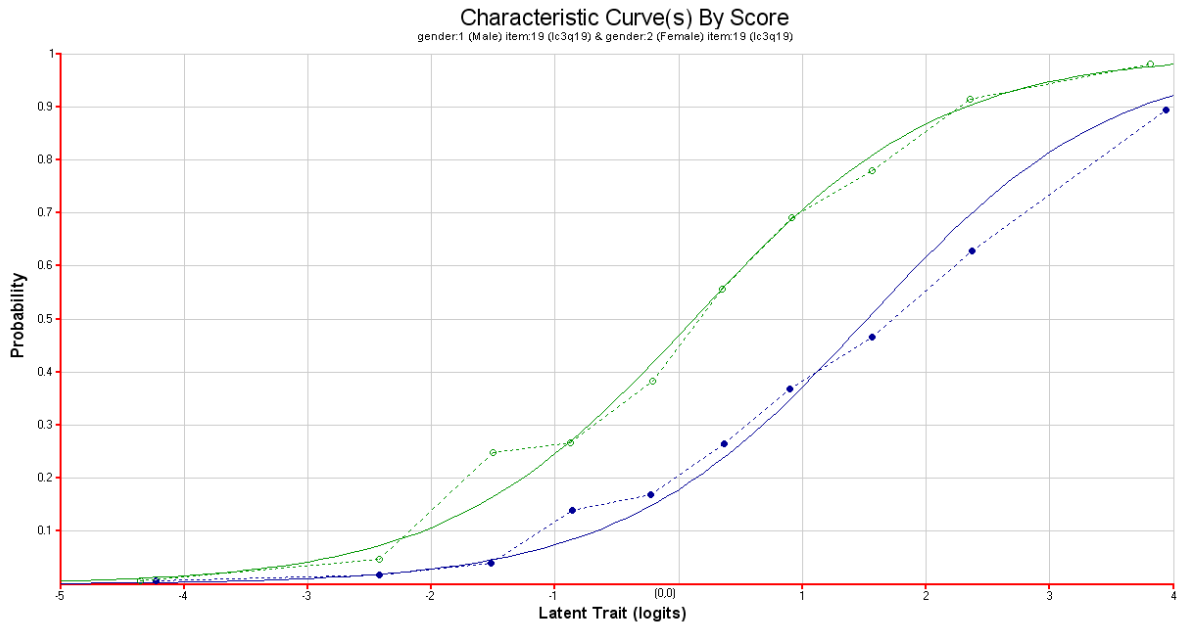
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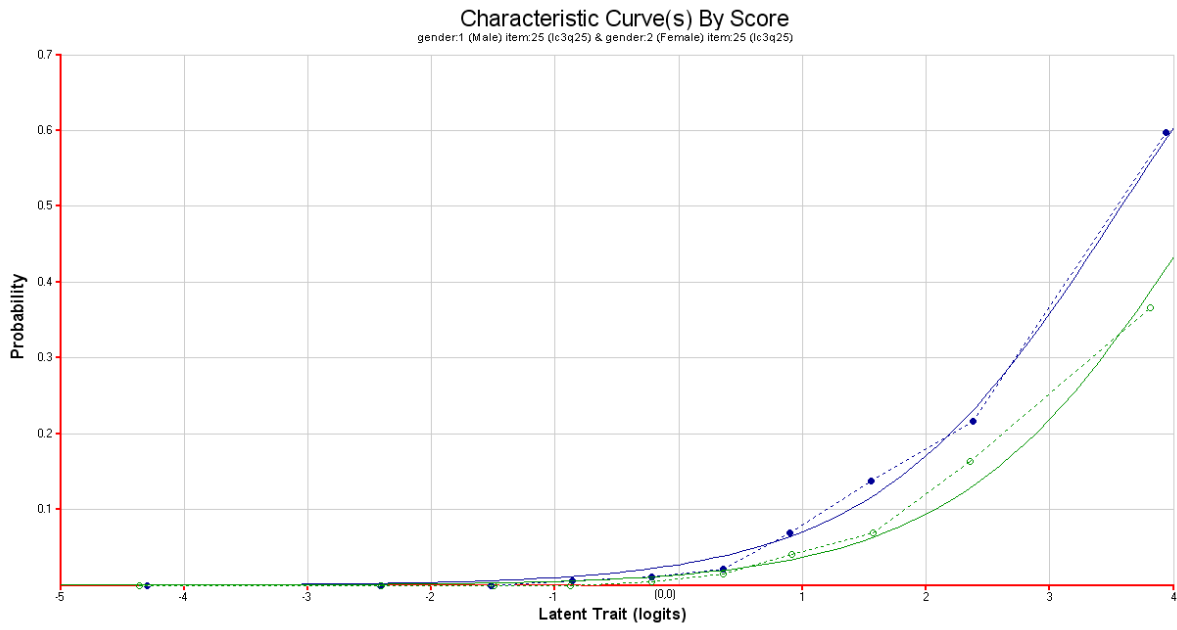
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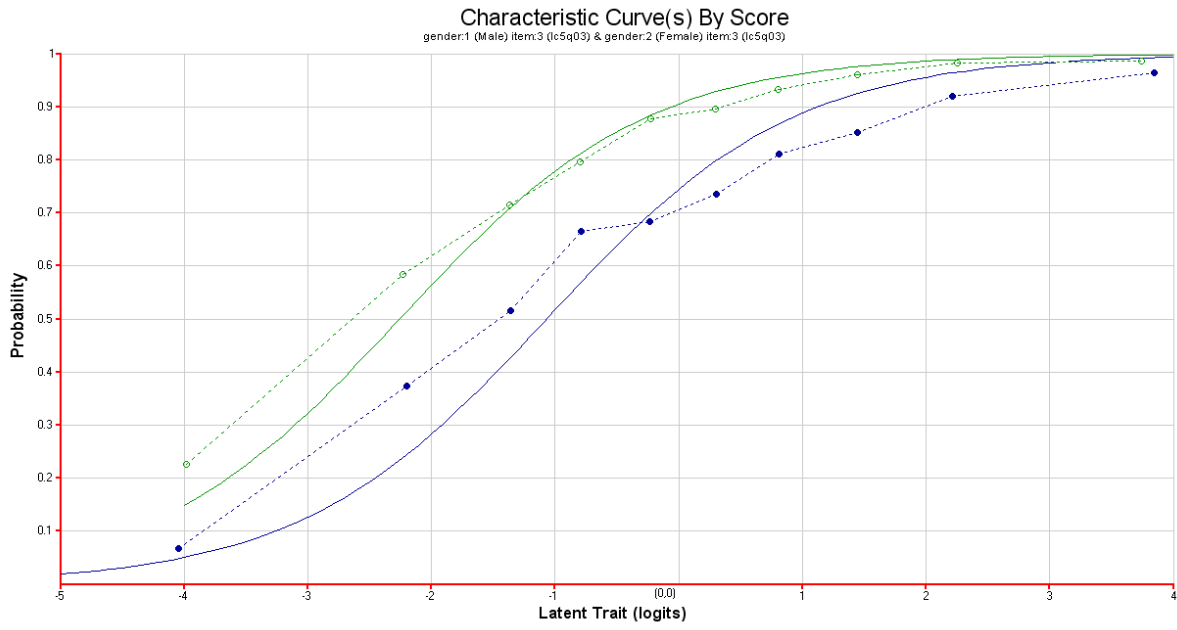
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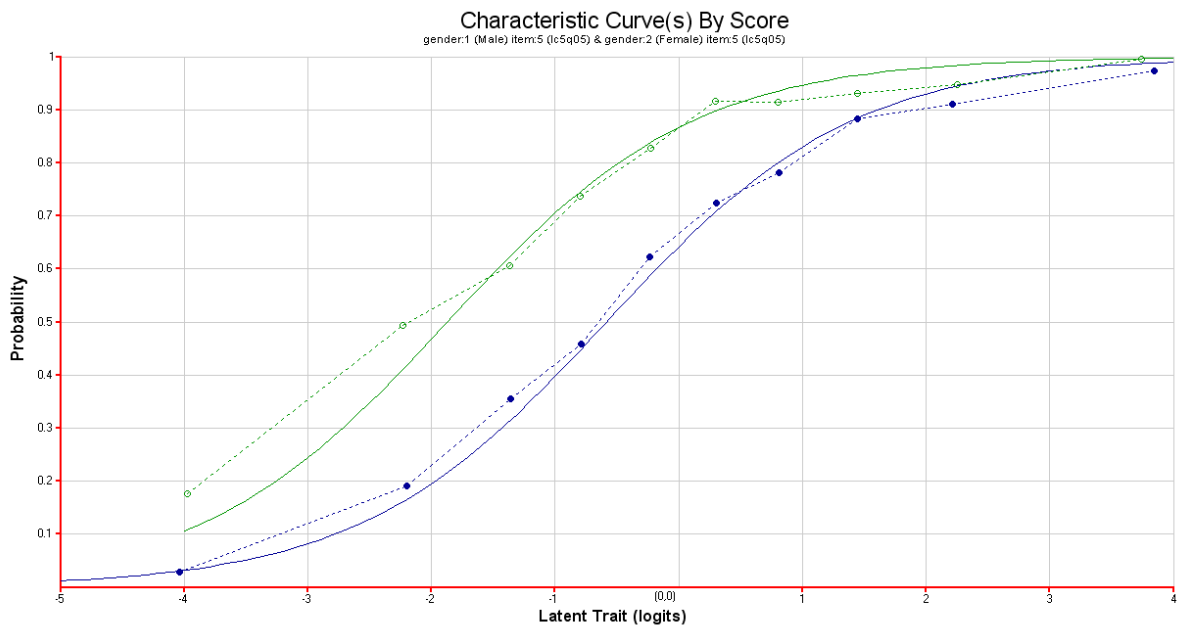
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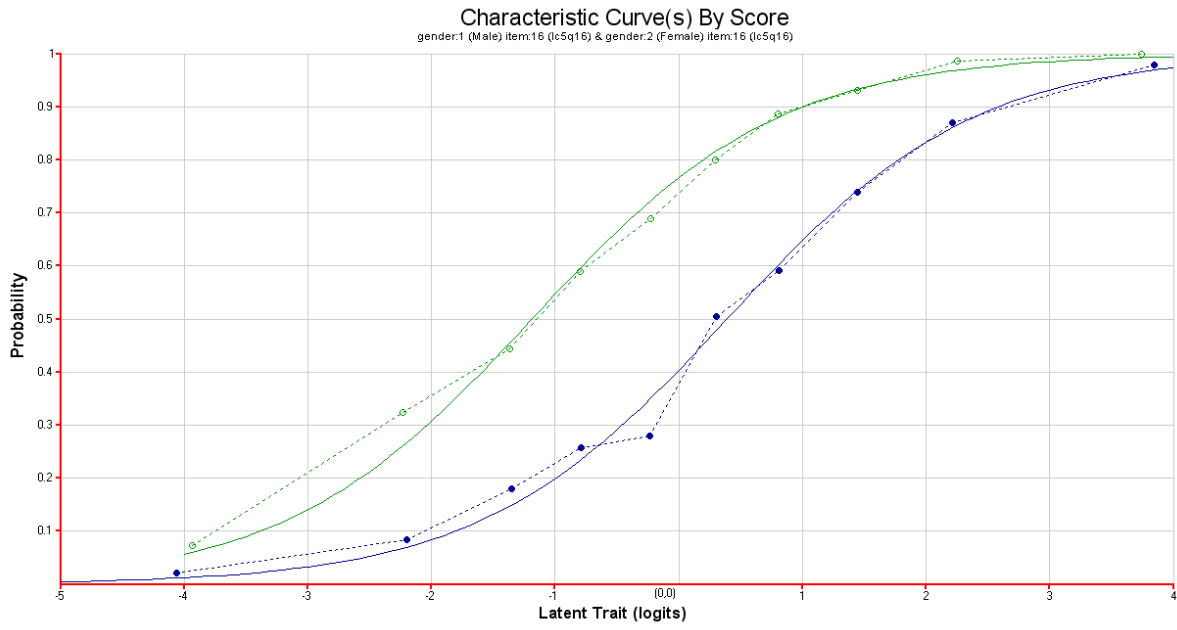
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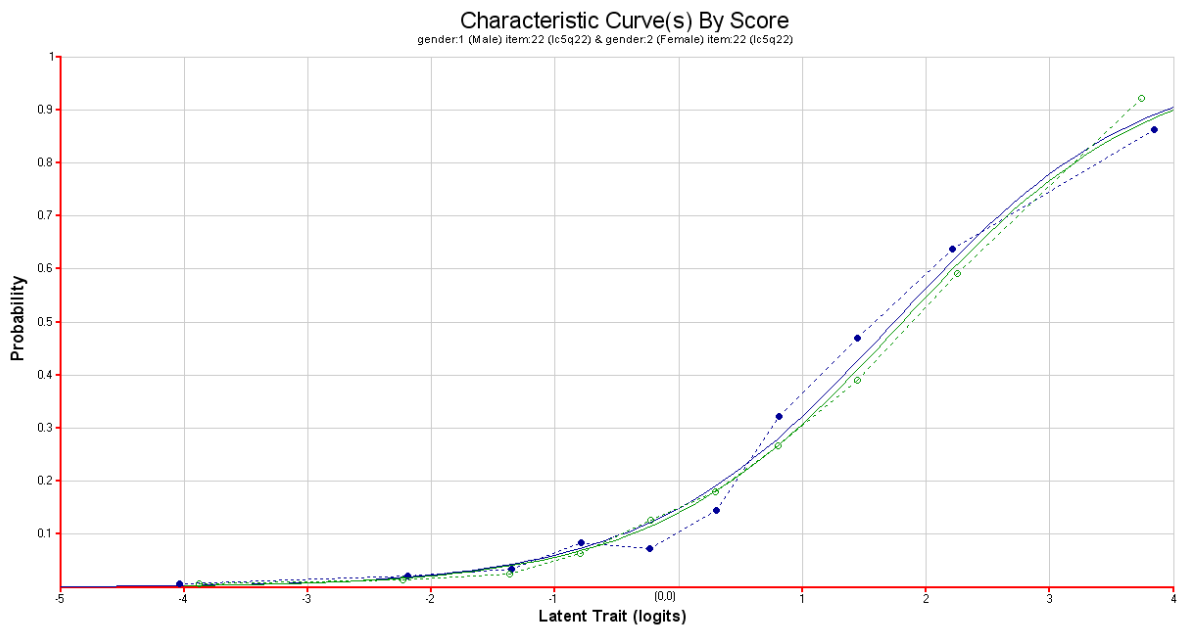
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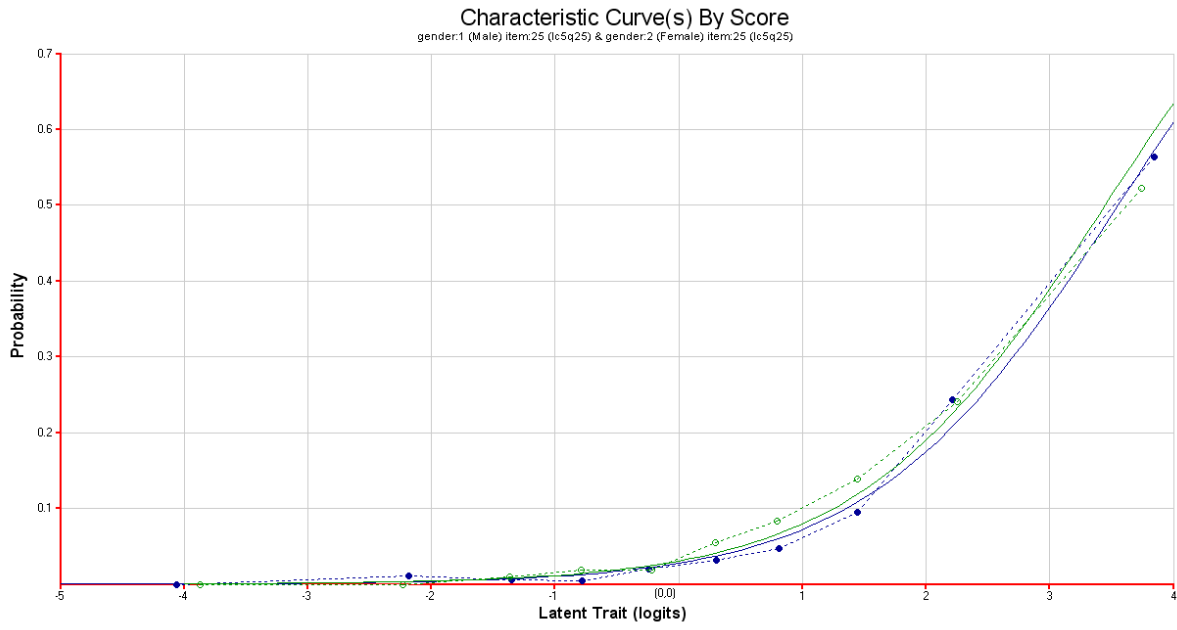
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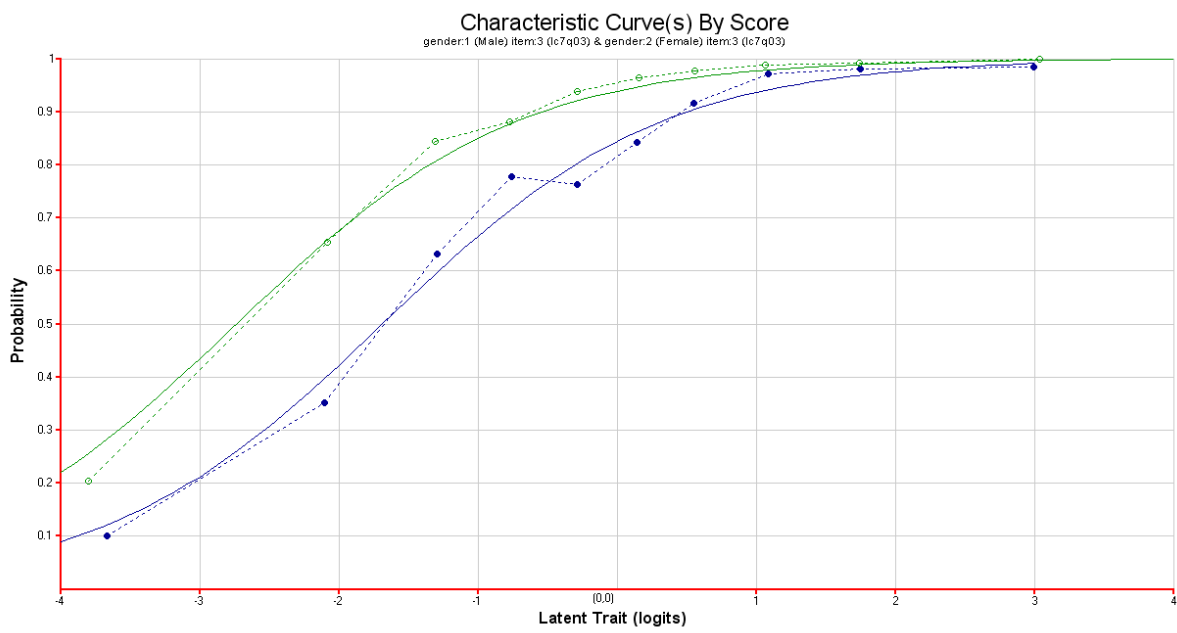
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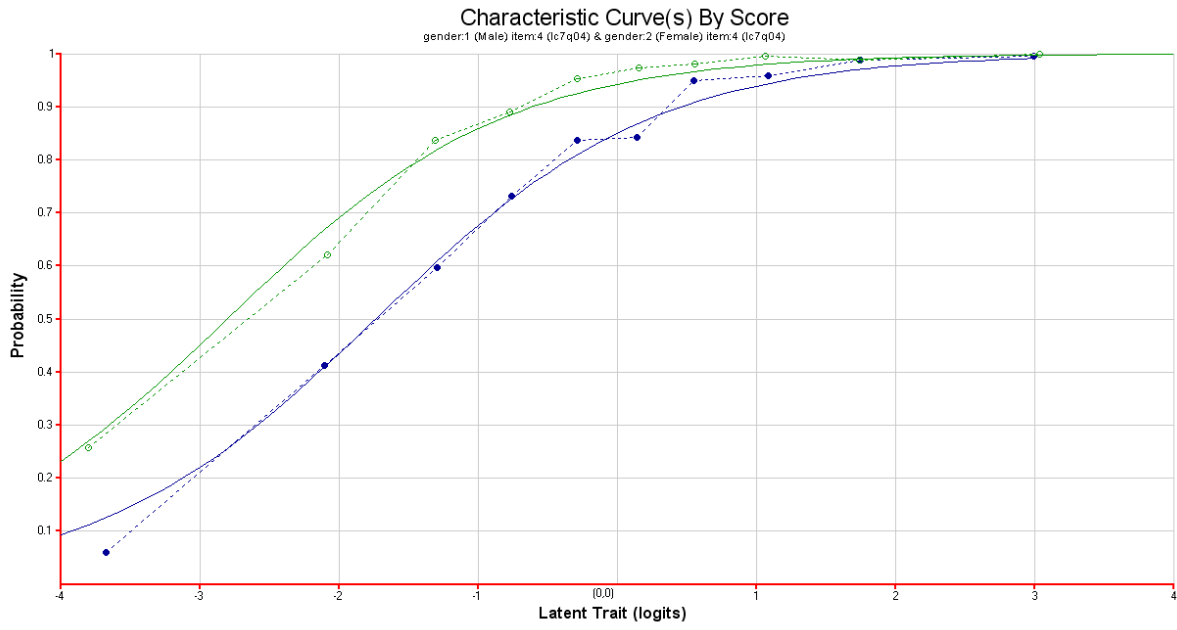
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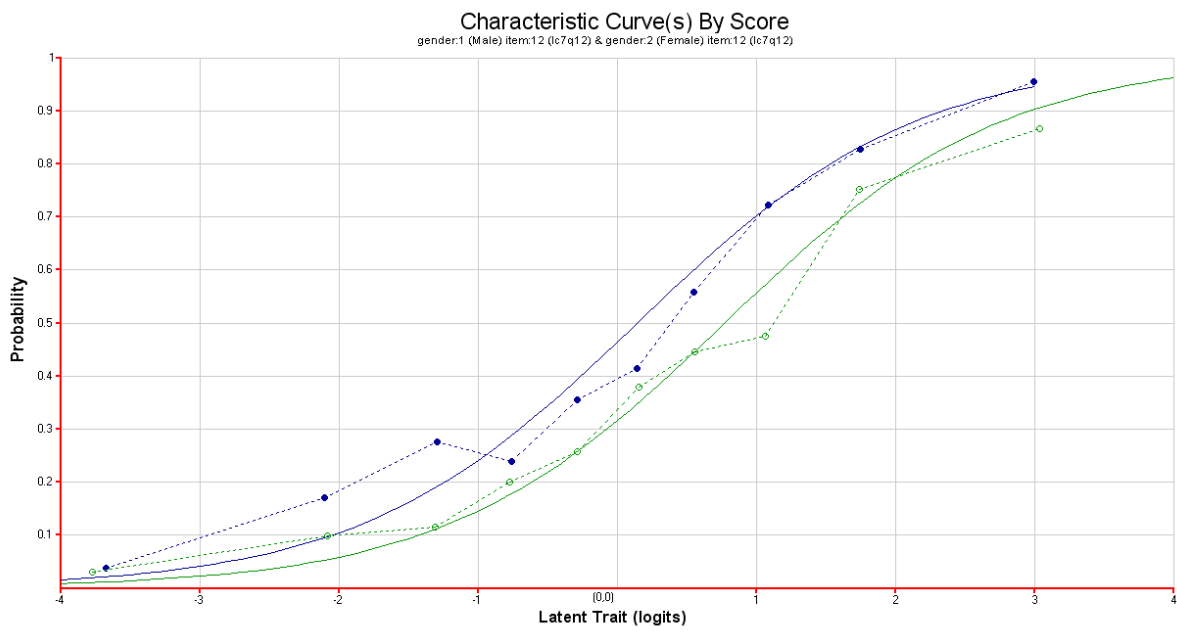
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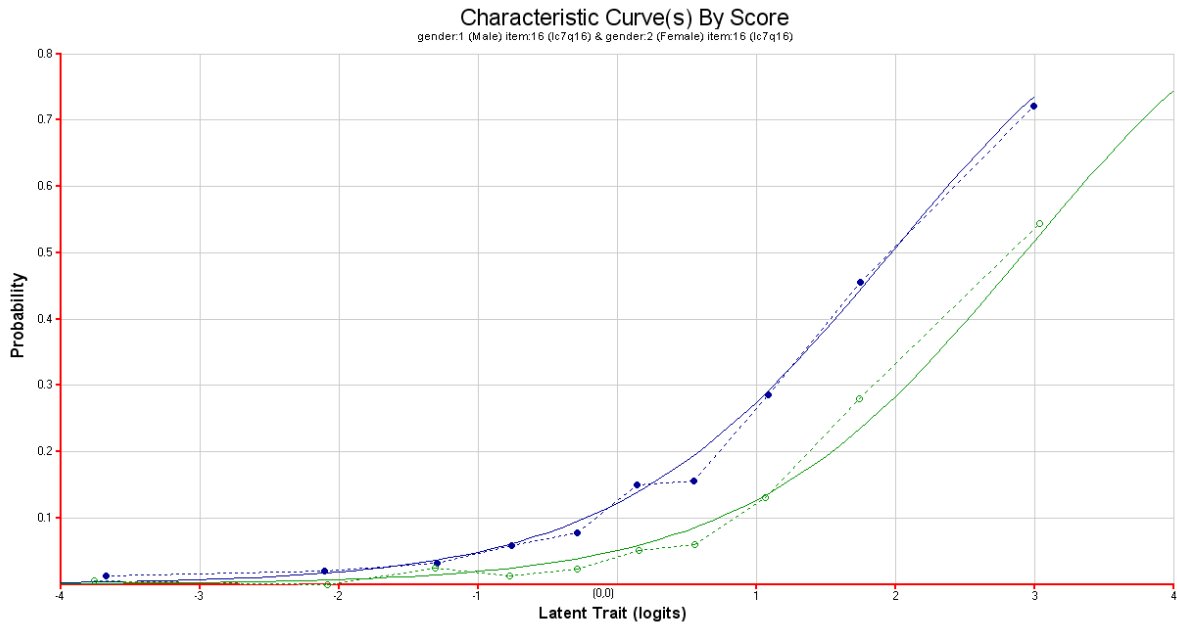
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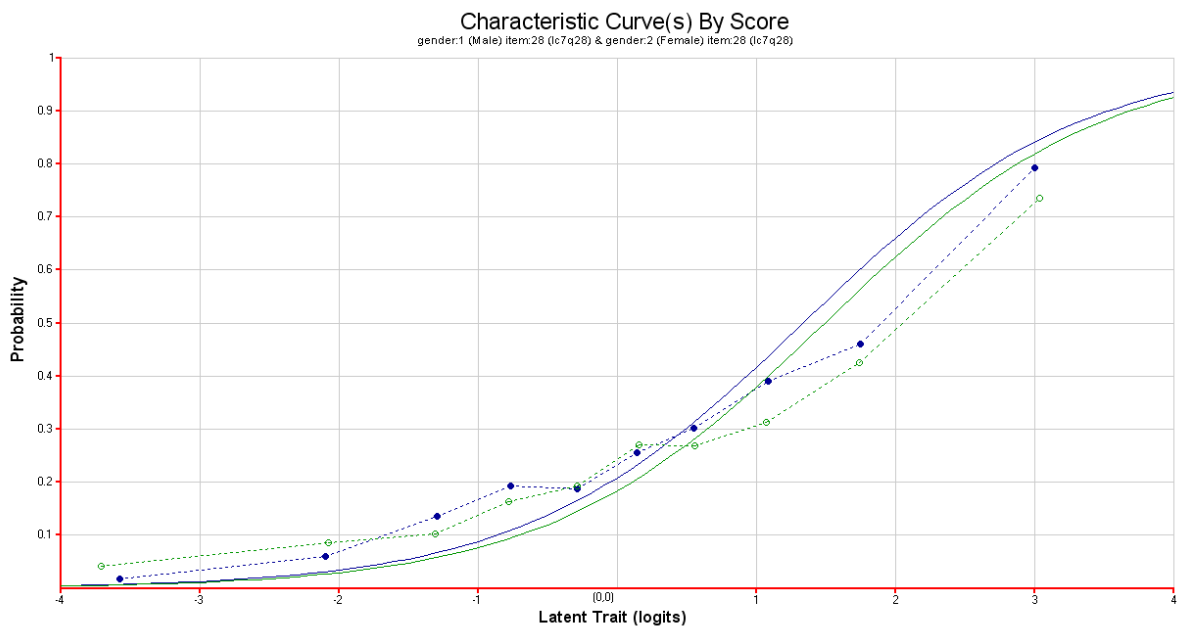
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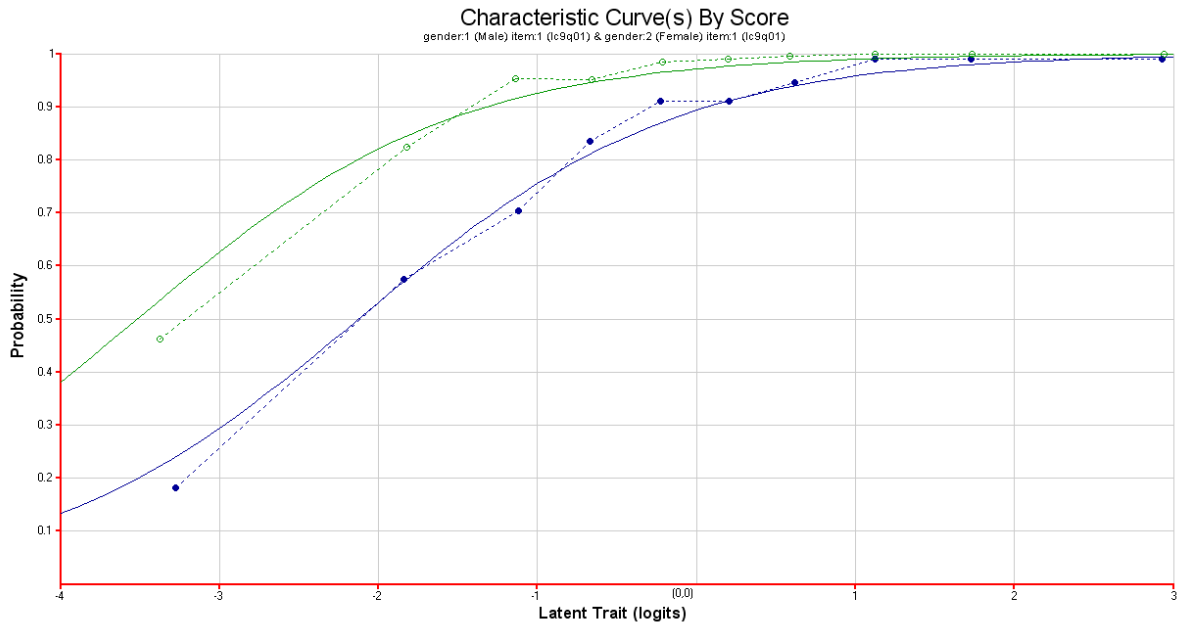
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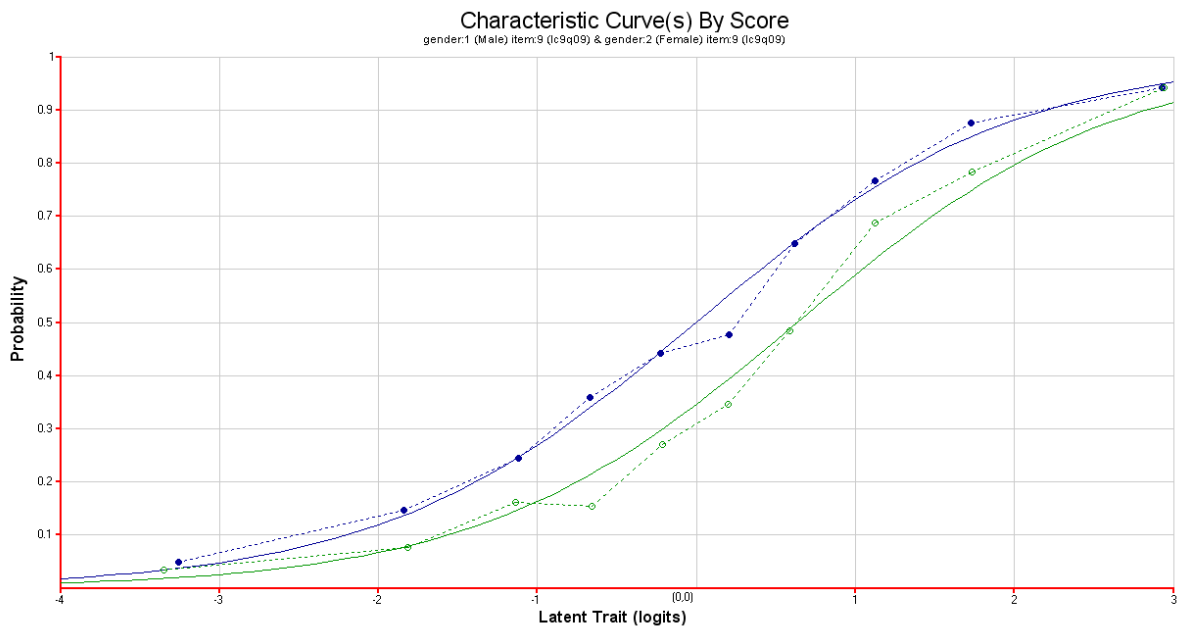
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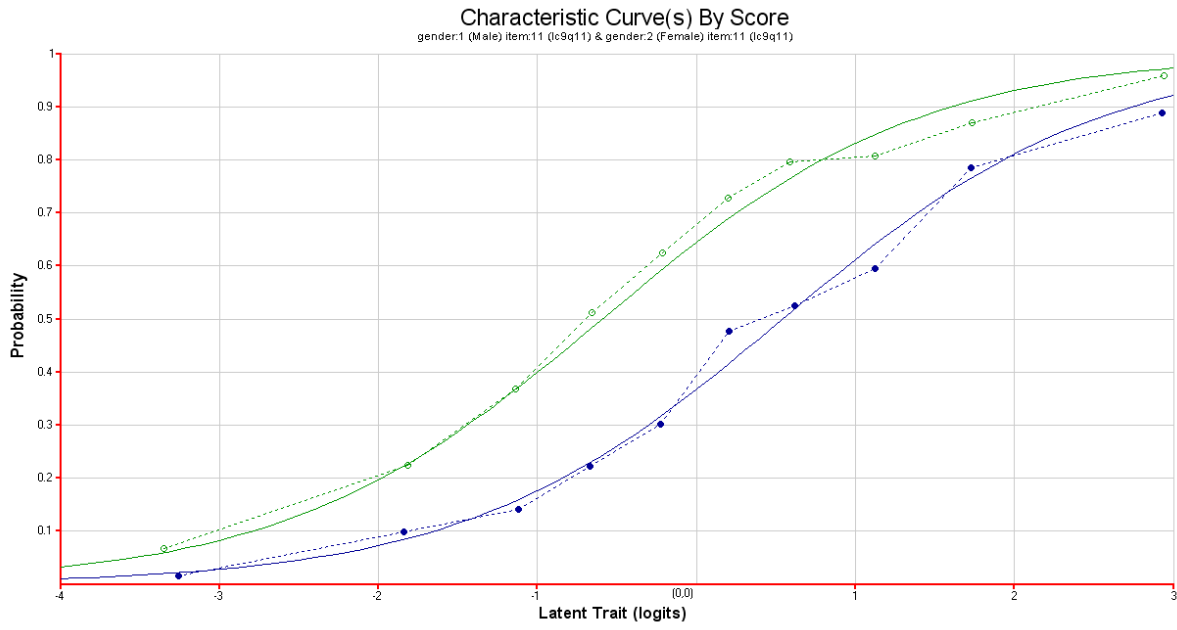
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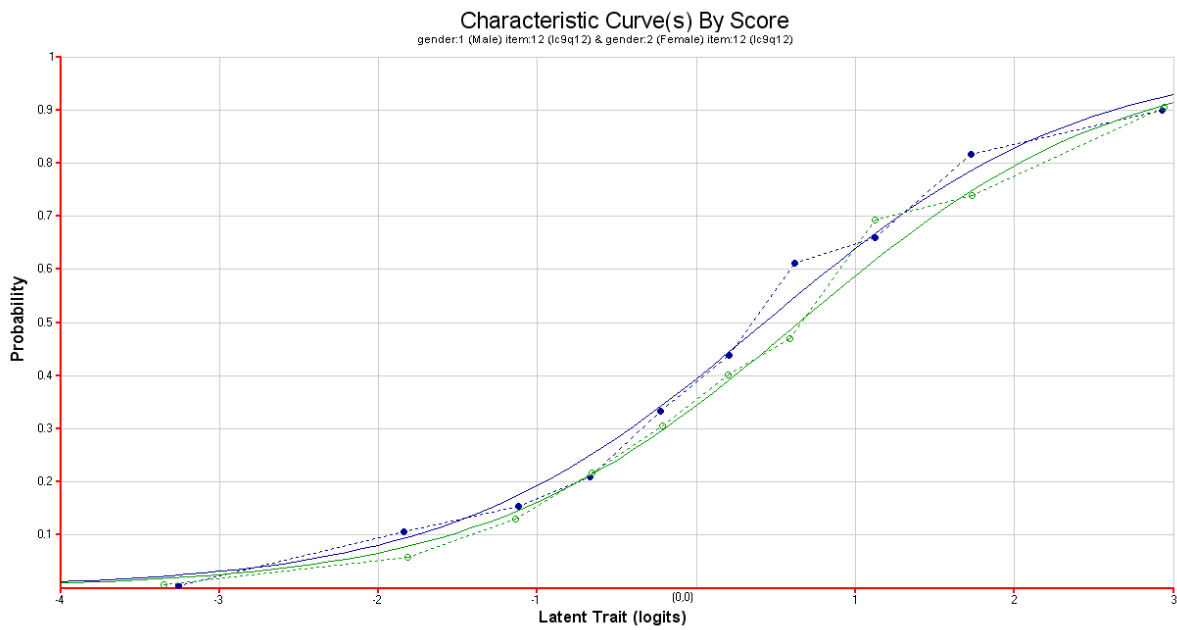
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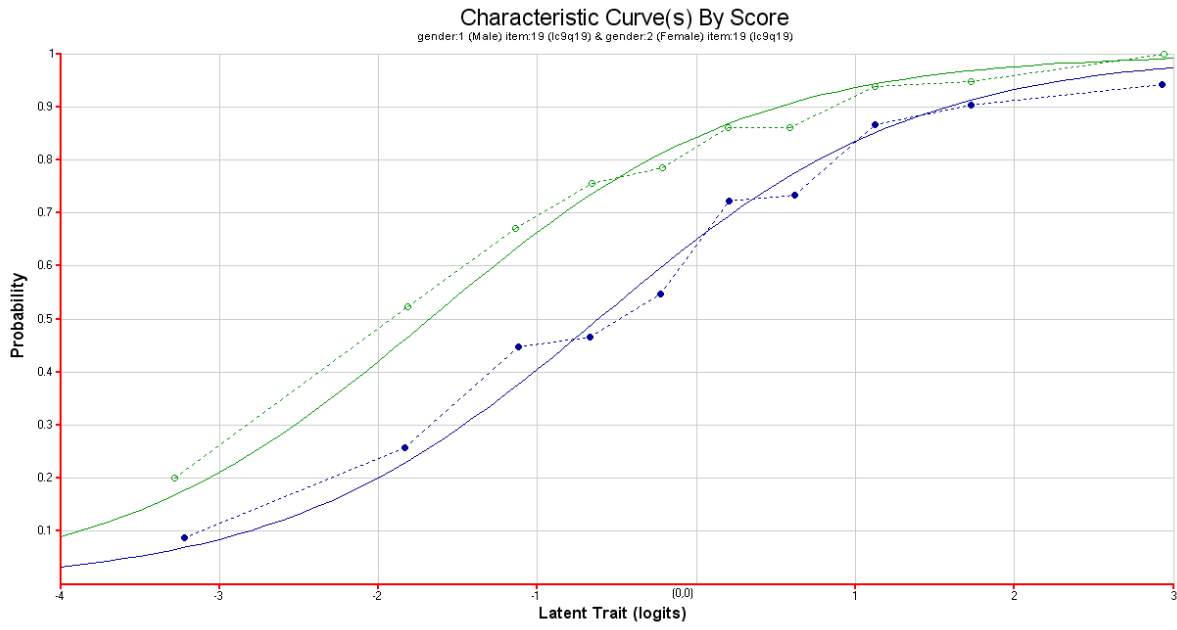
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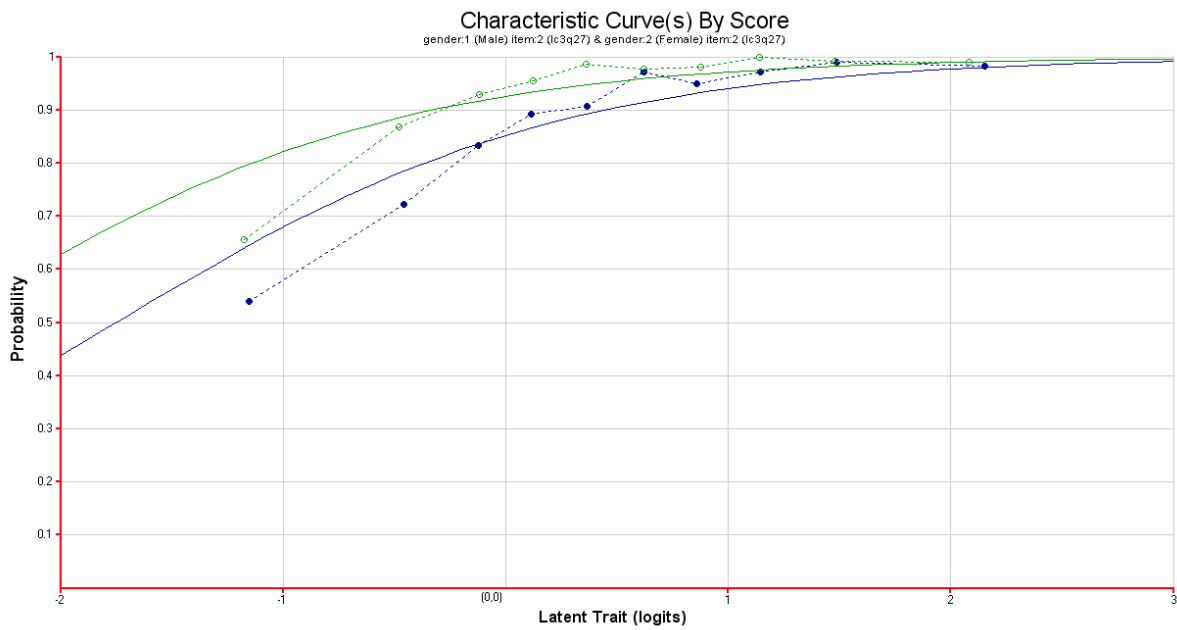
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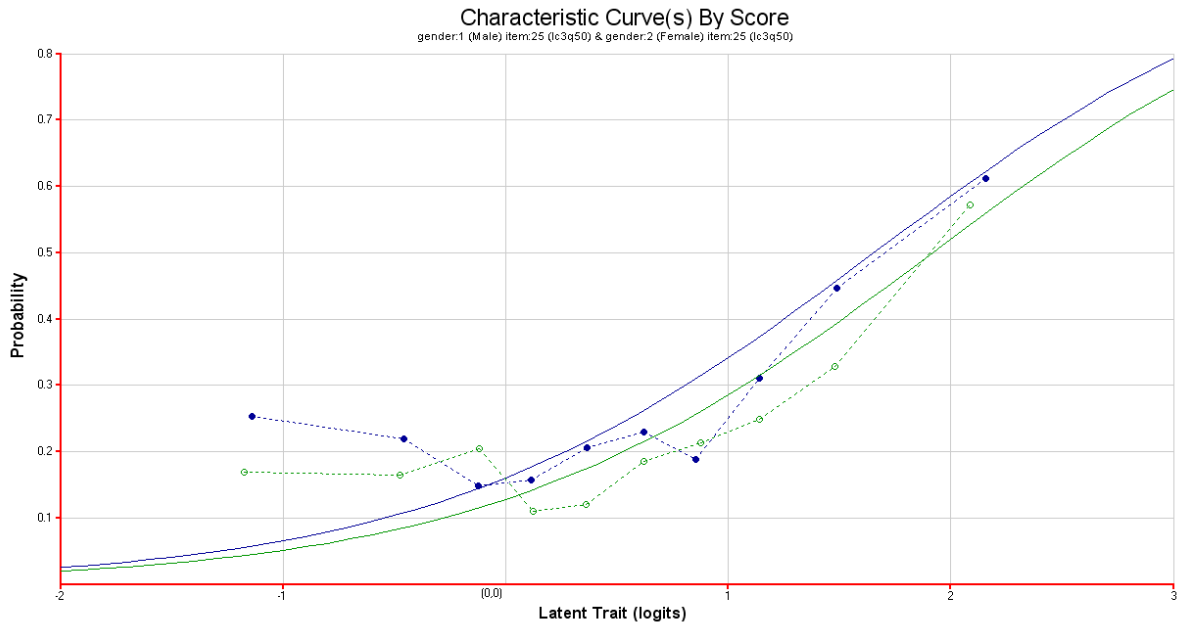
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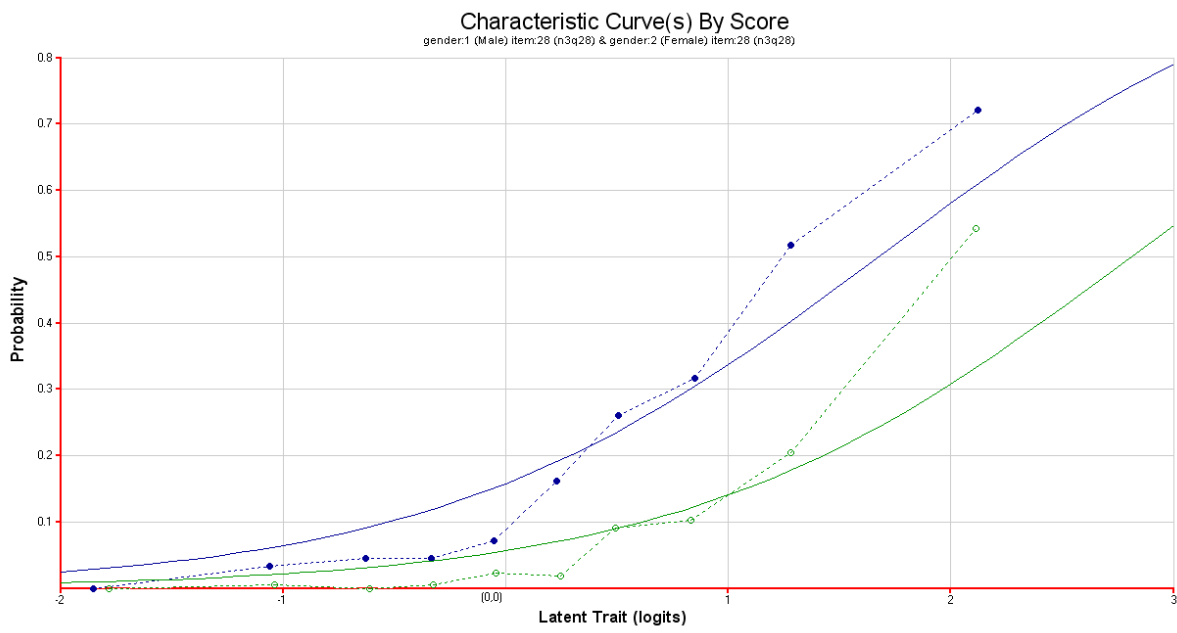
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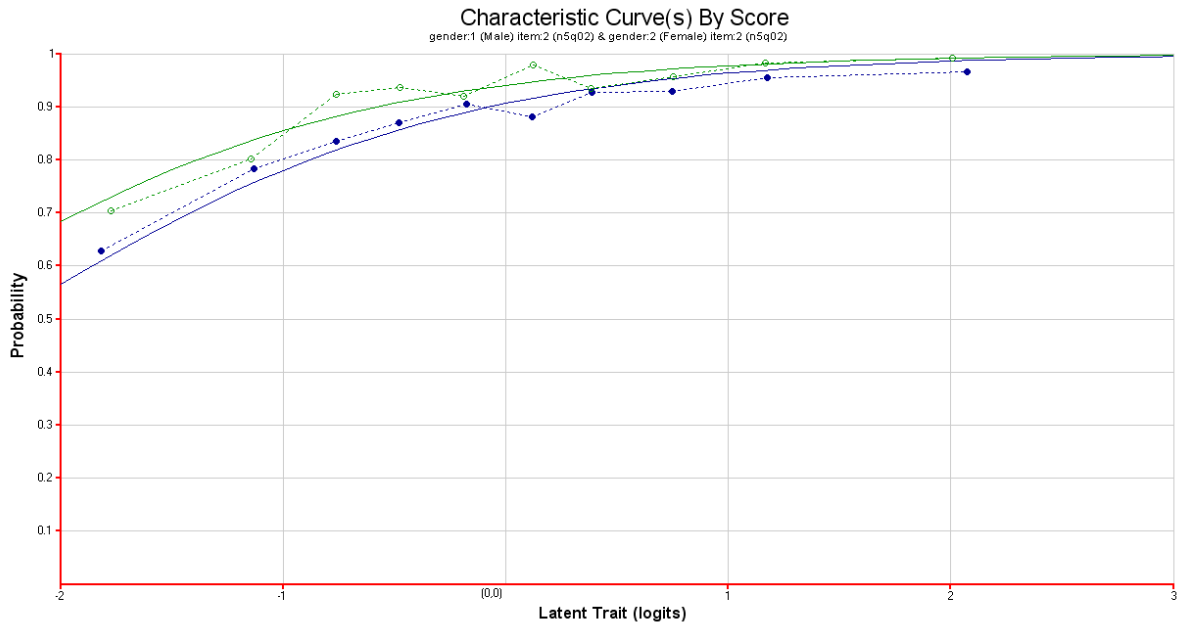
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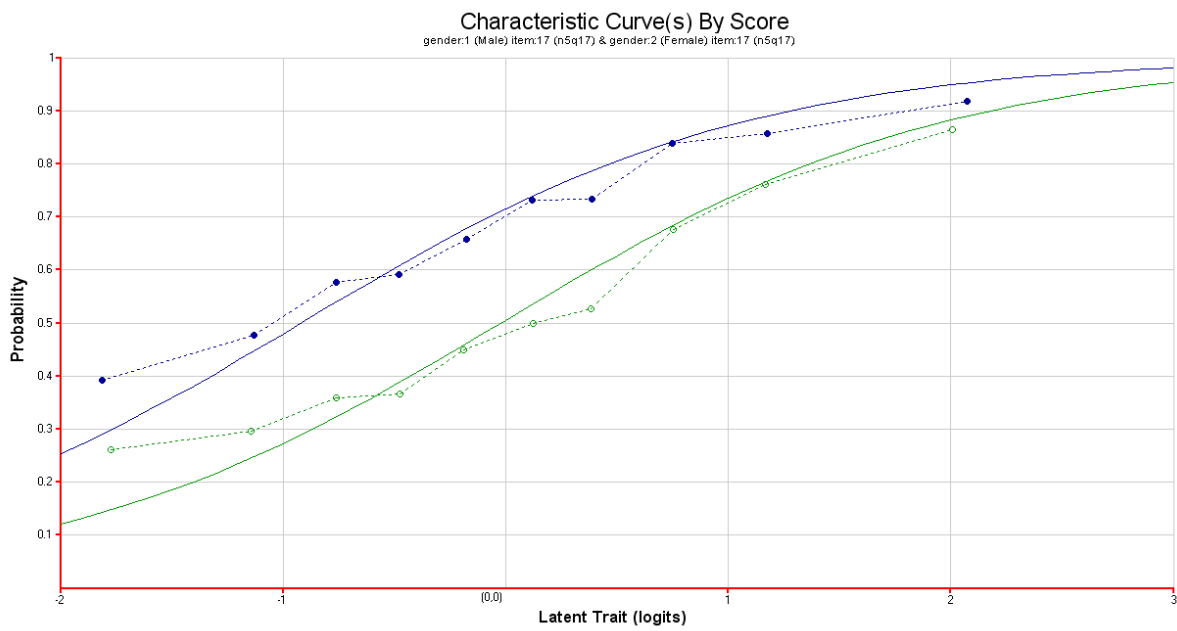
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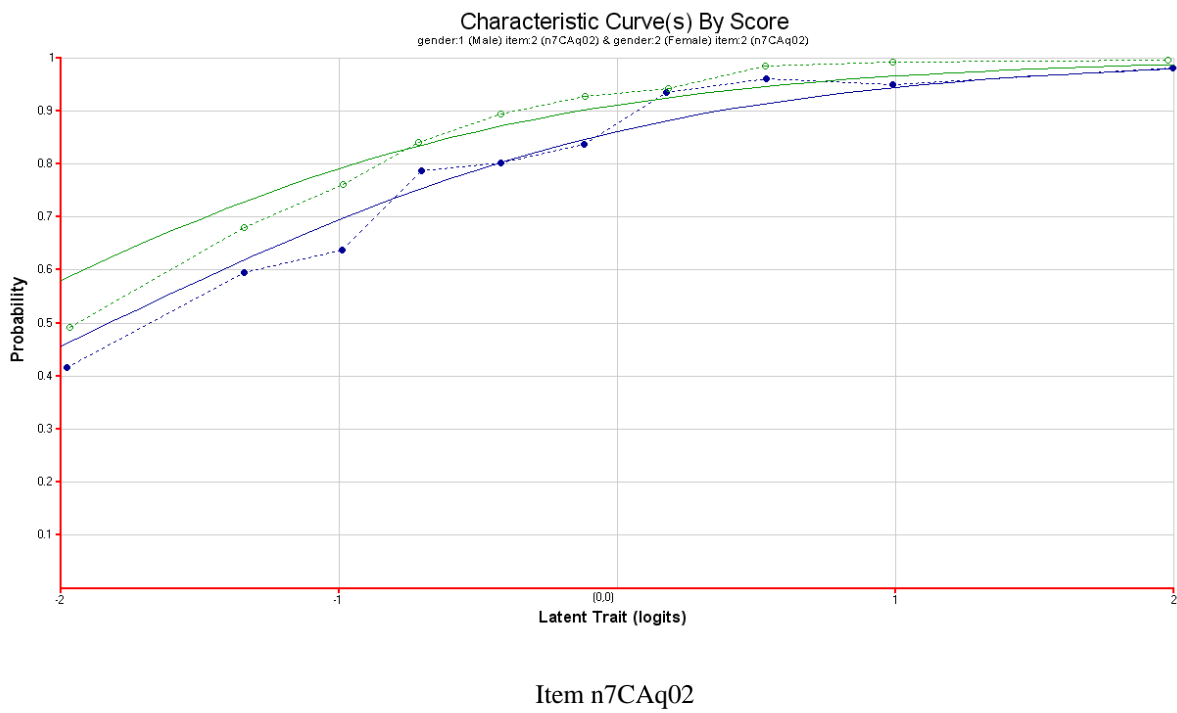
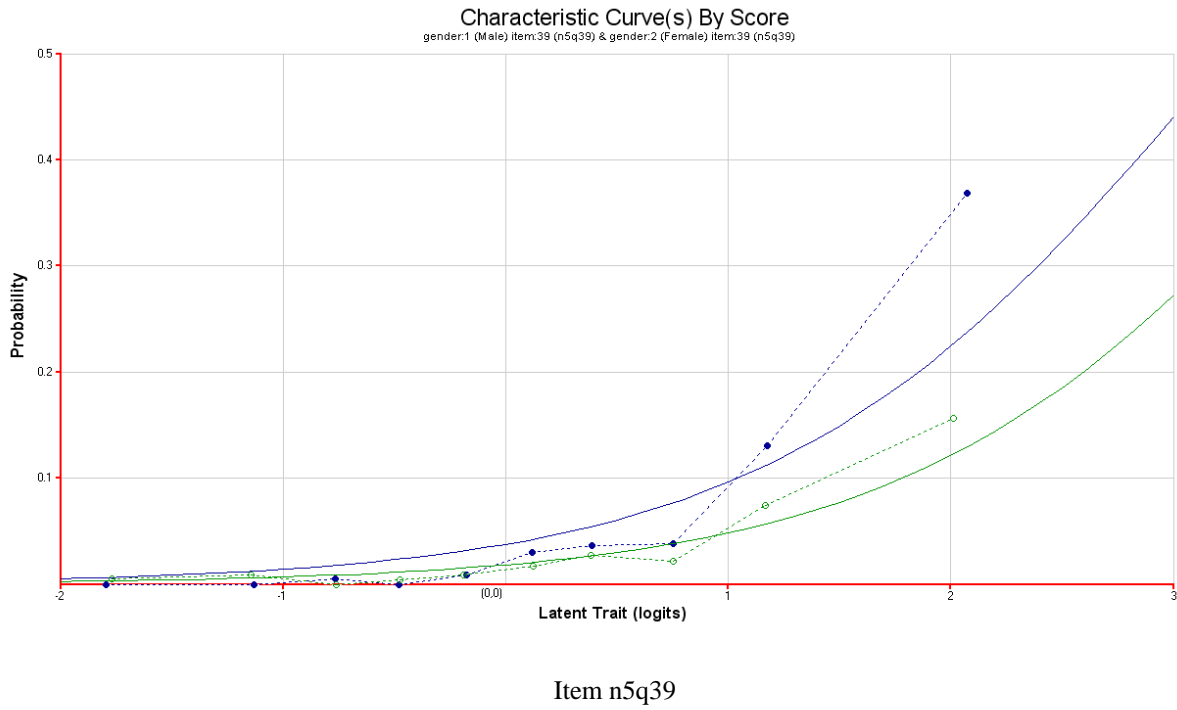
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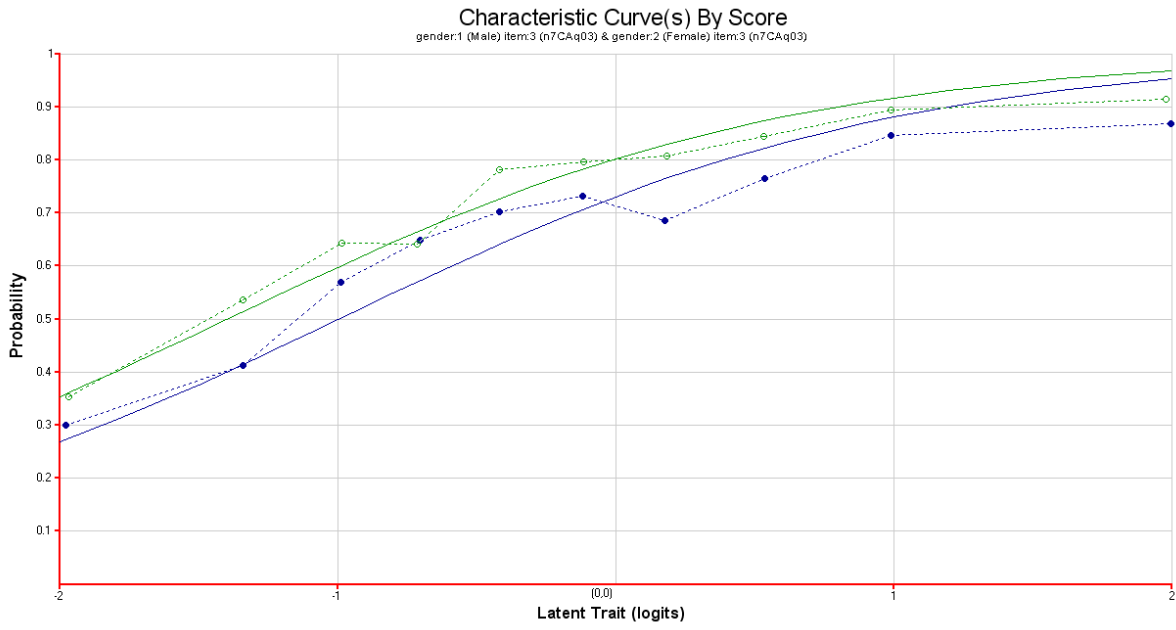


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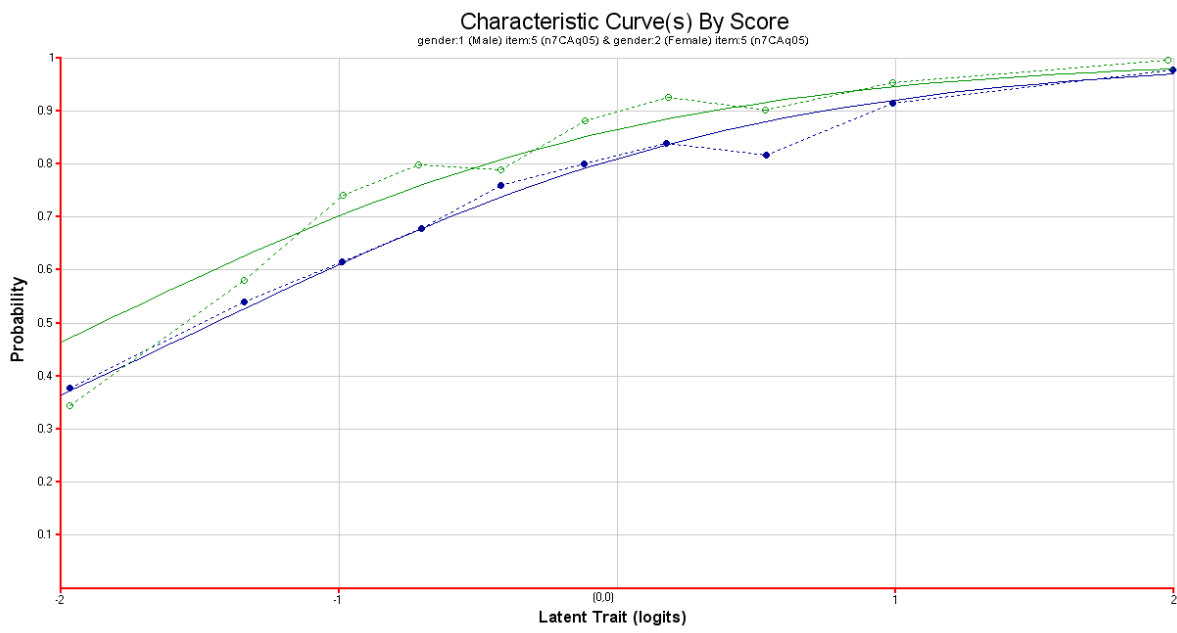


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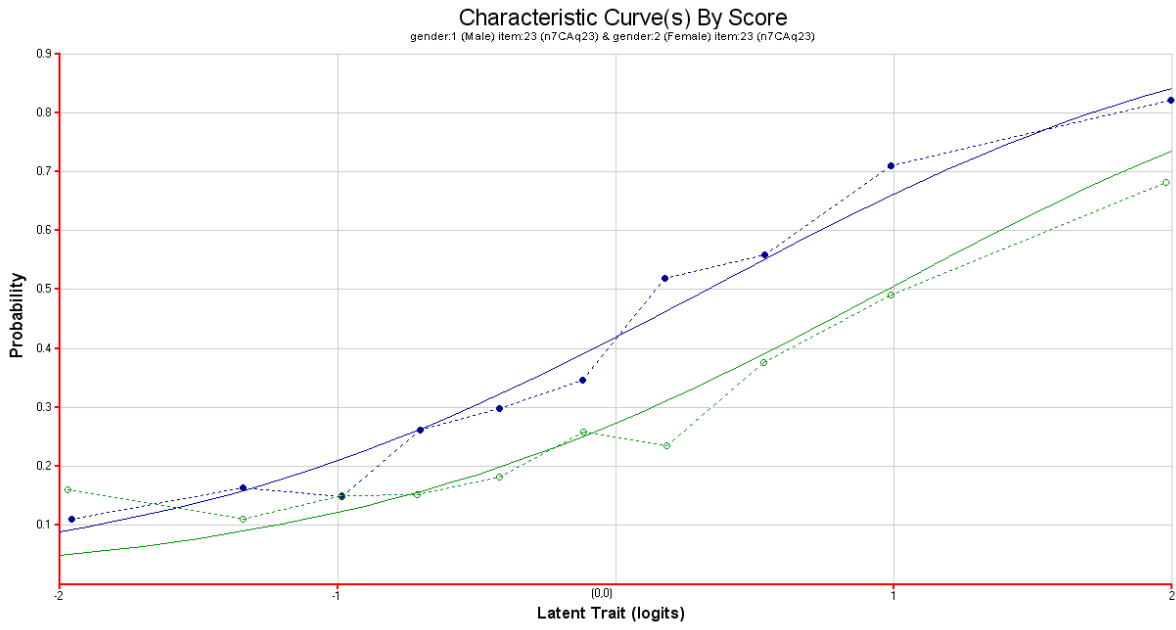




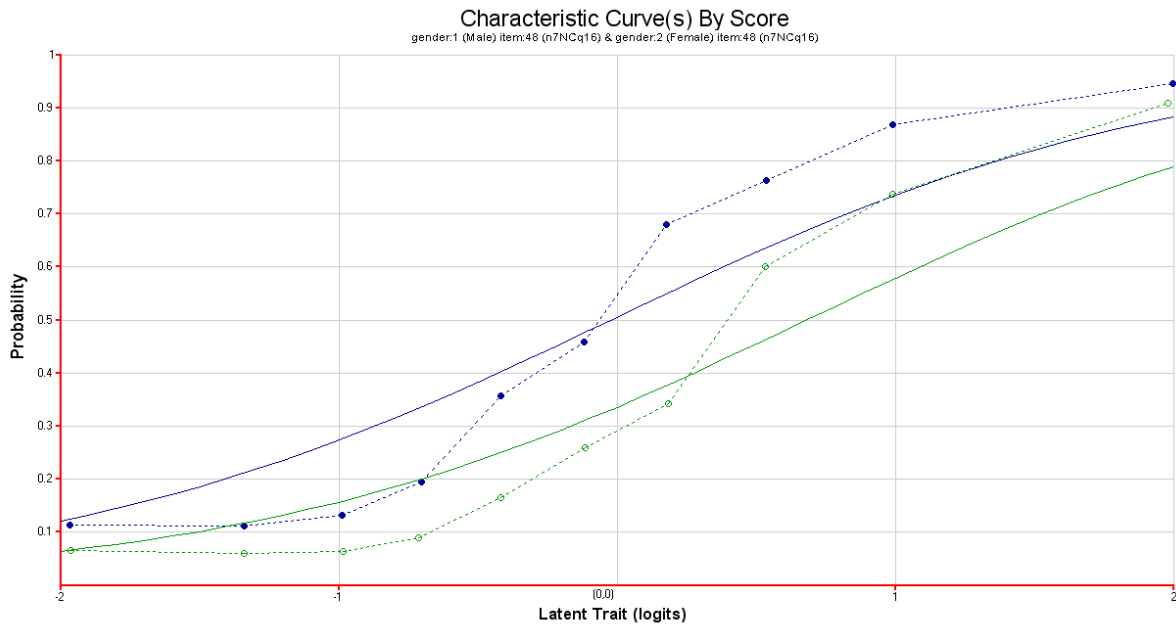
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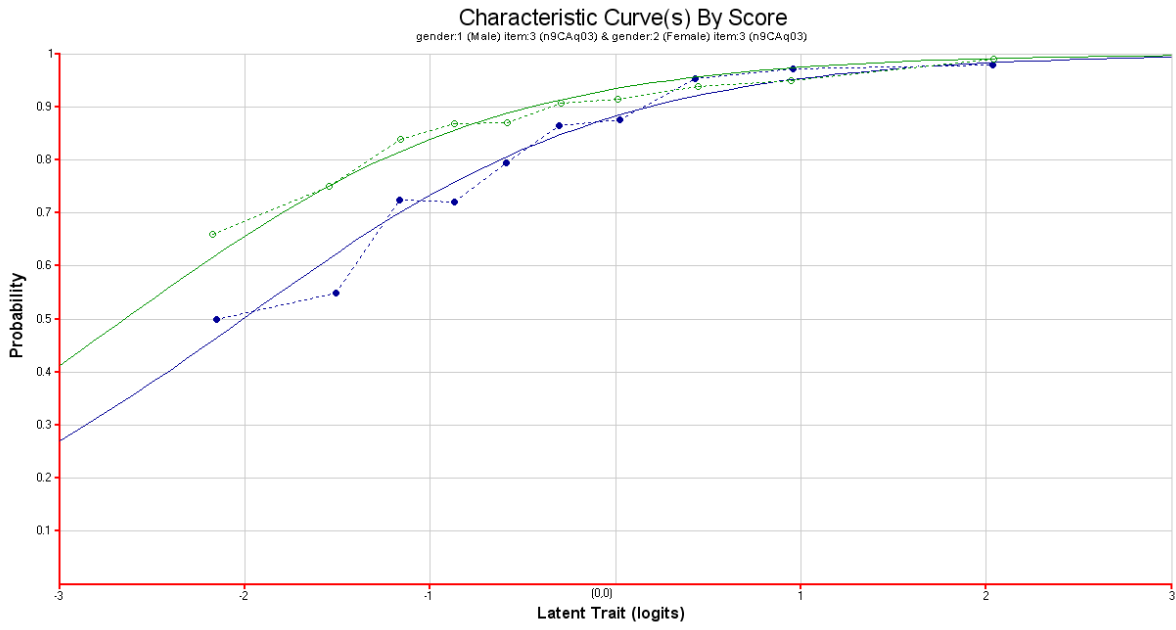
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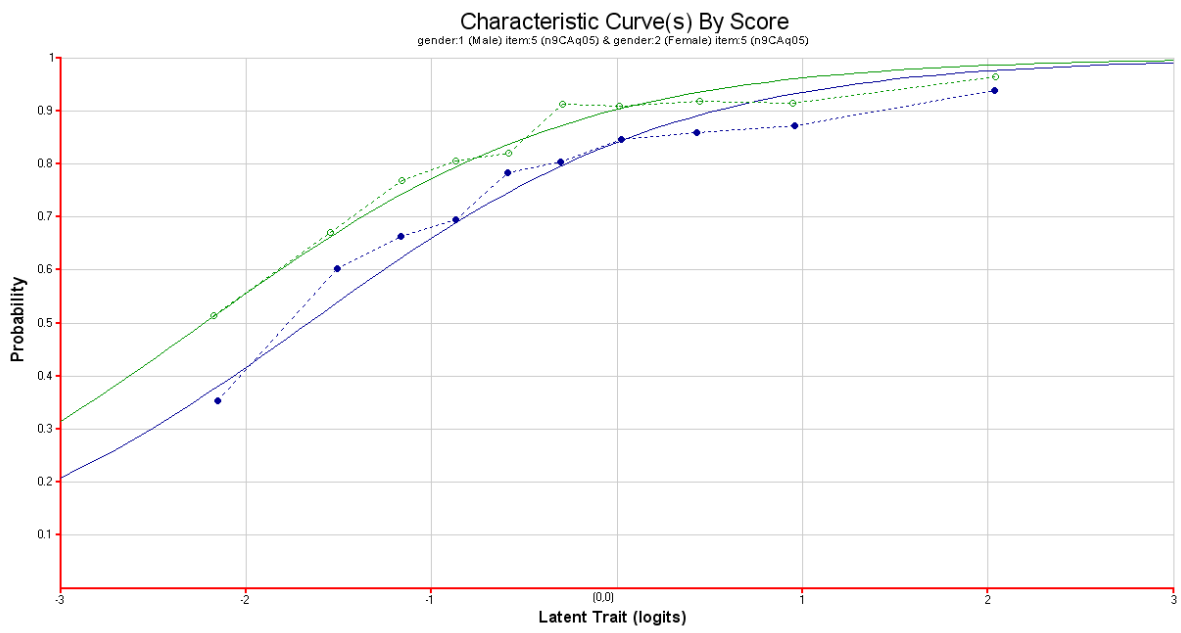
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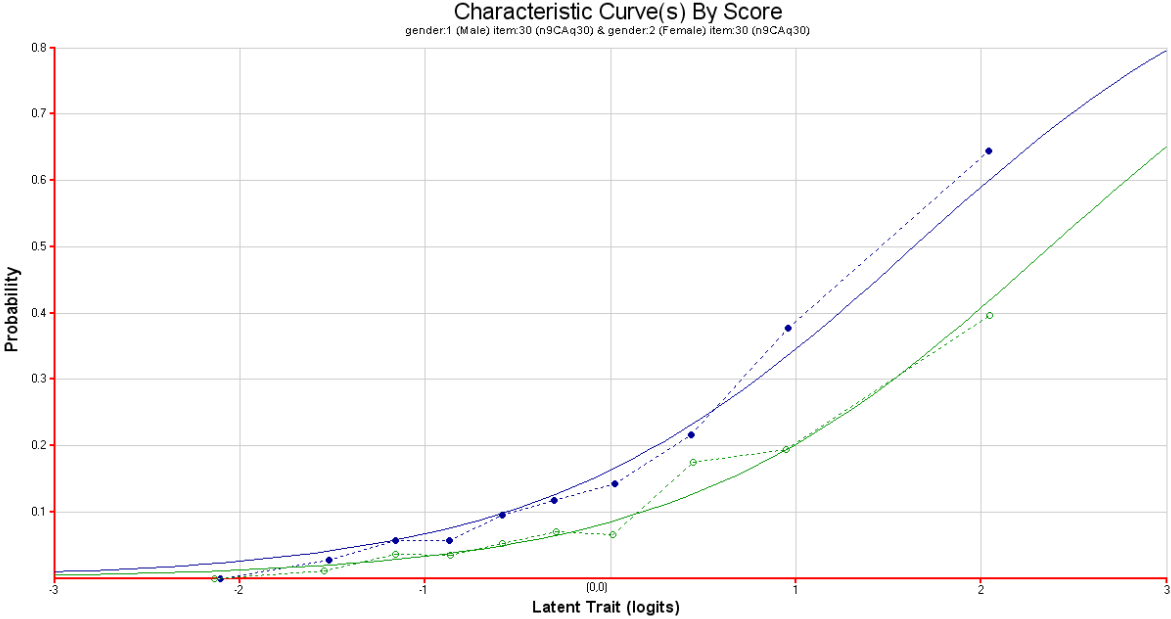
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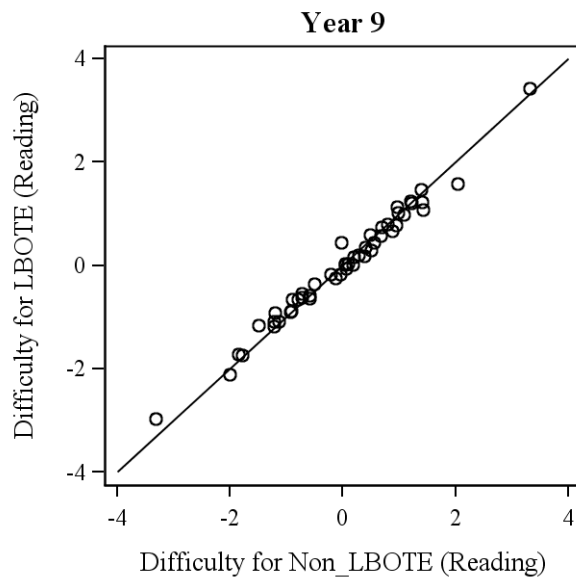
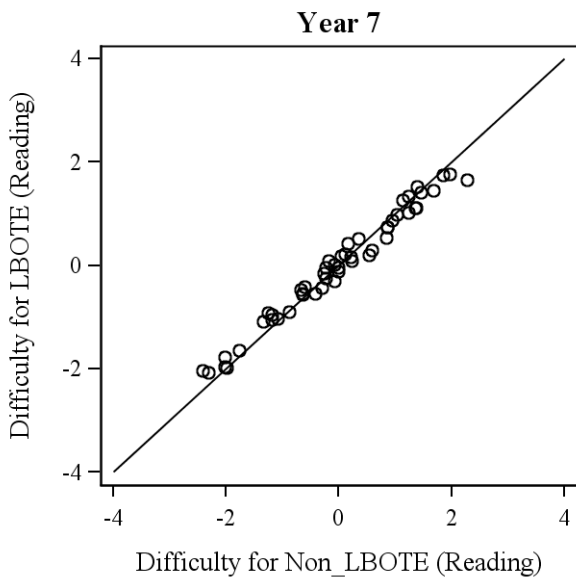
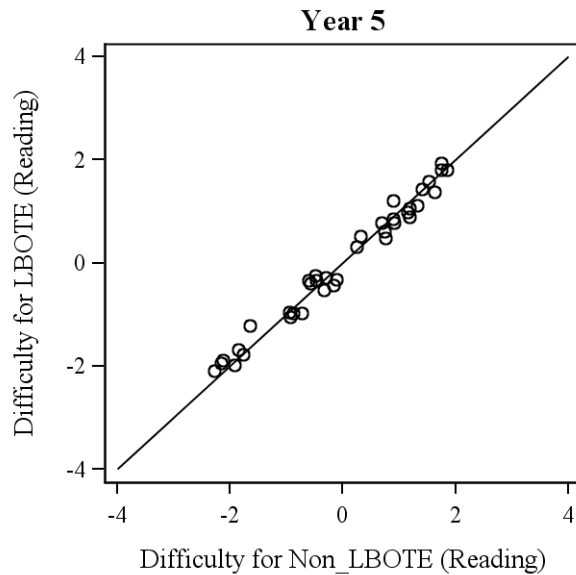
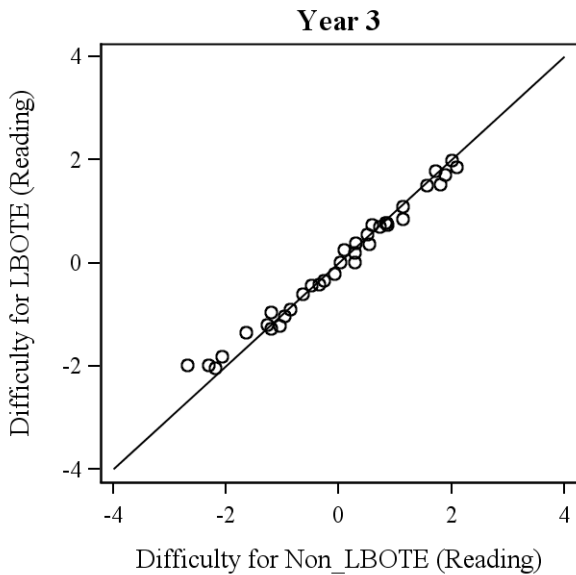
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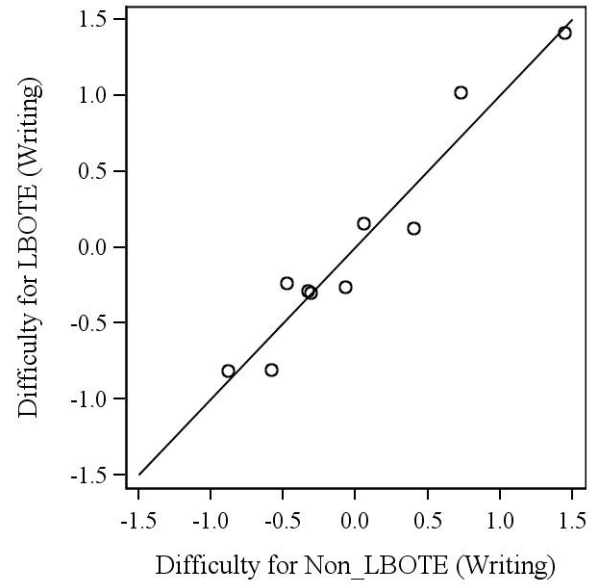


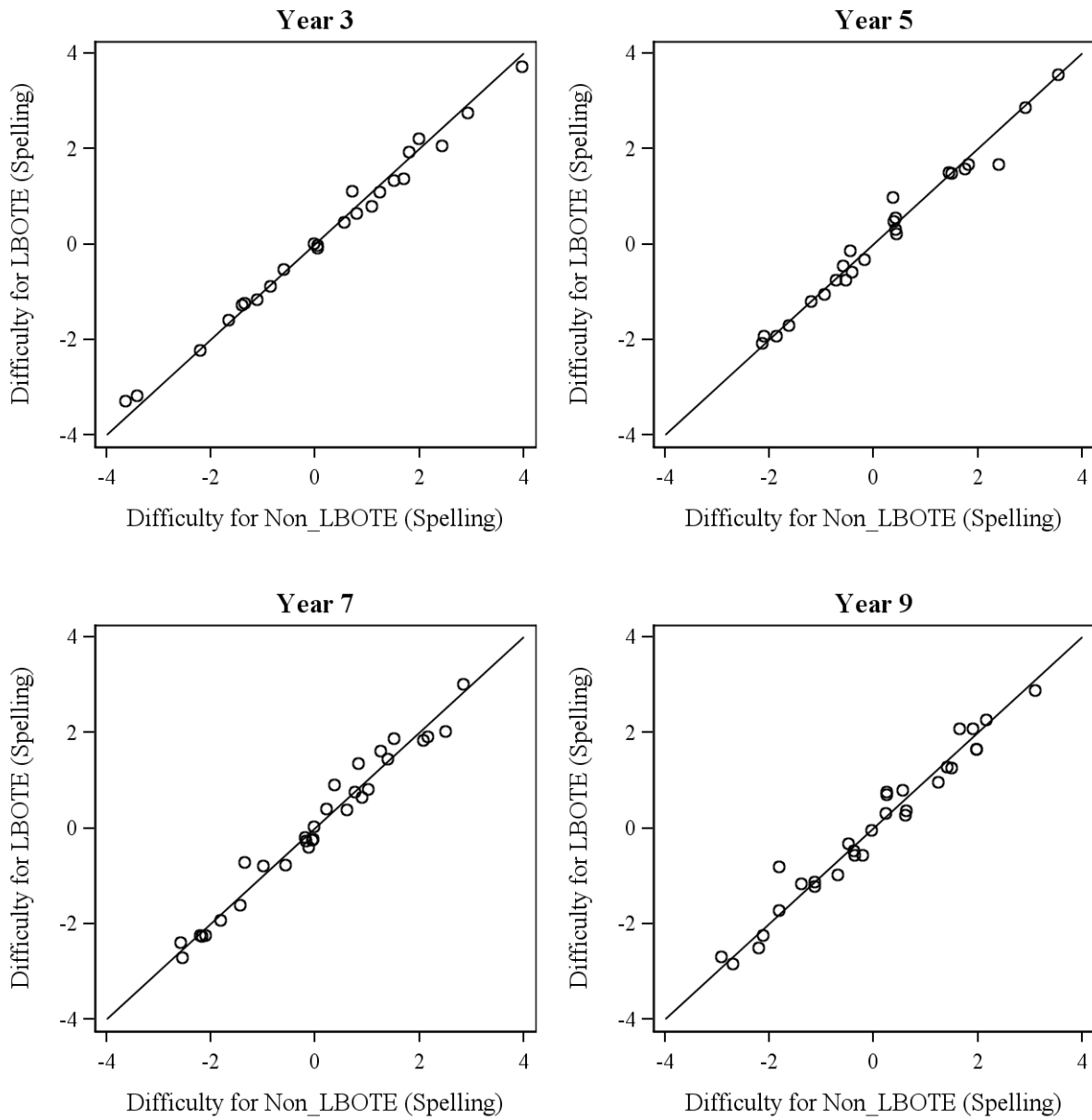
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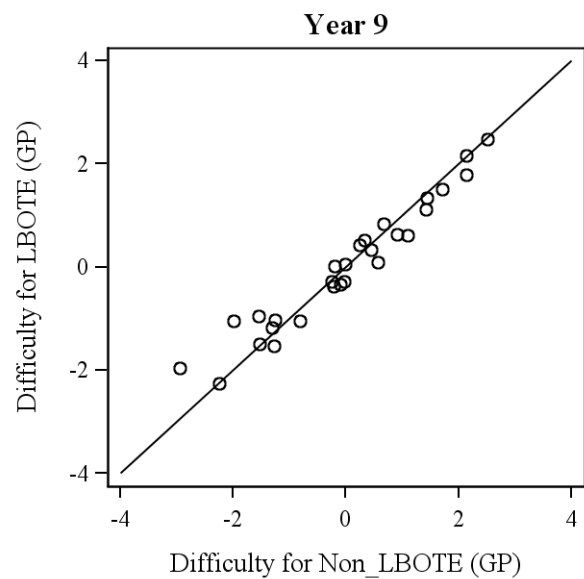
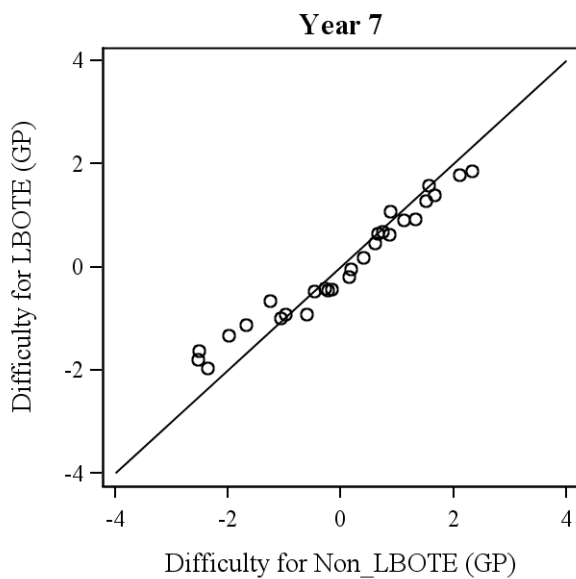
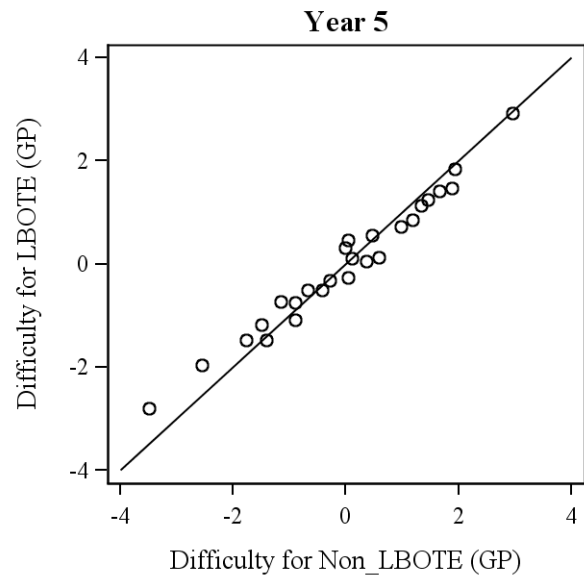
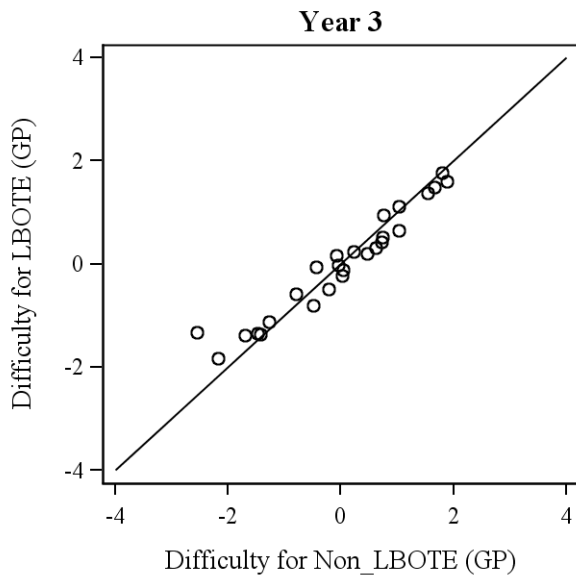
APPENDIX G. LBOTE DIF ANALYSIS

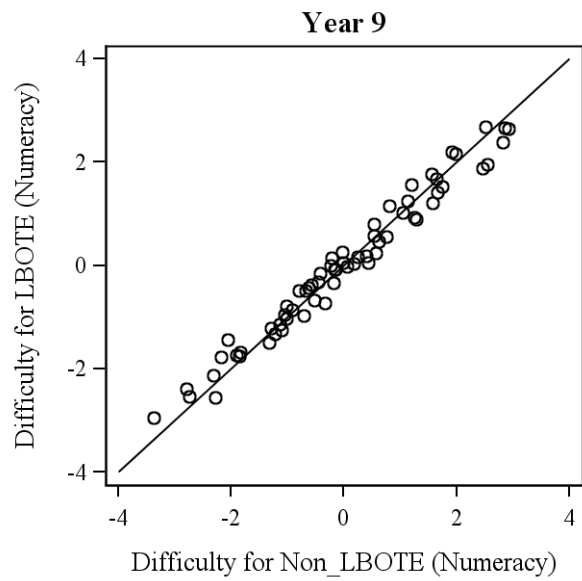
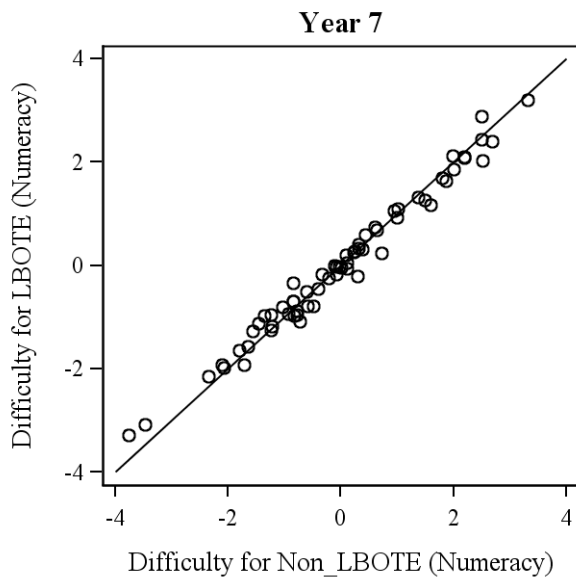
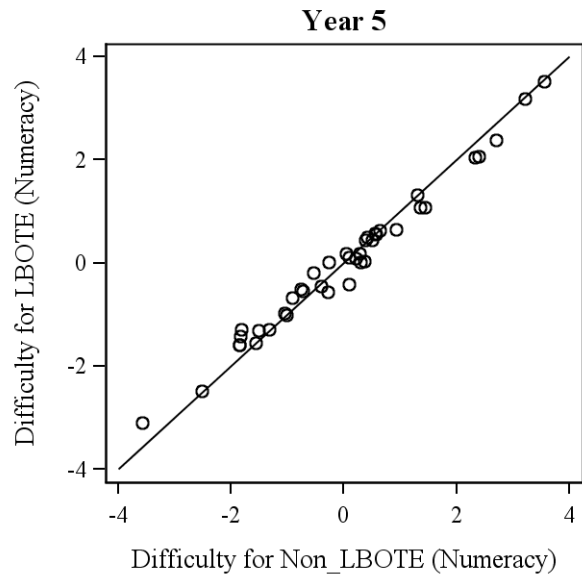
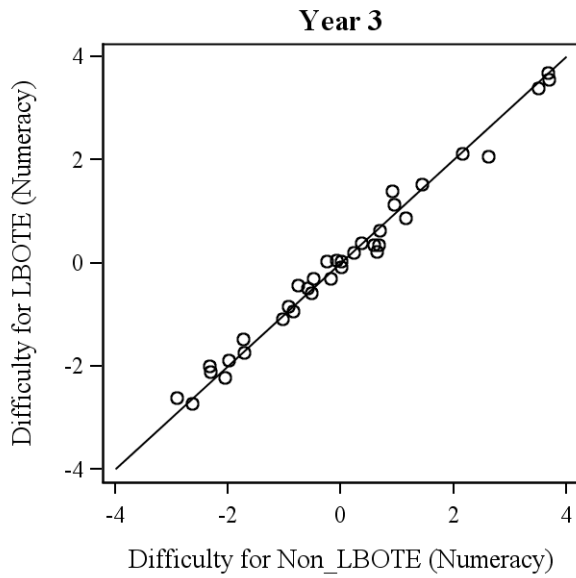
G.1 Centred Item Locations of LBOTE and Non-LBOTE Students in Reading (2013)



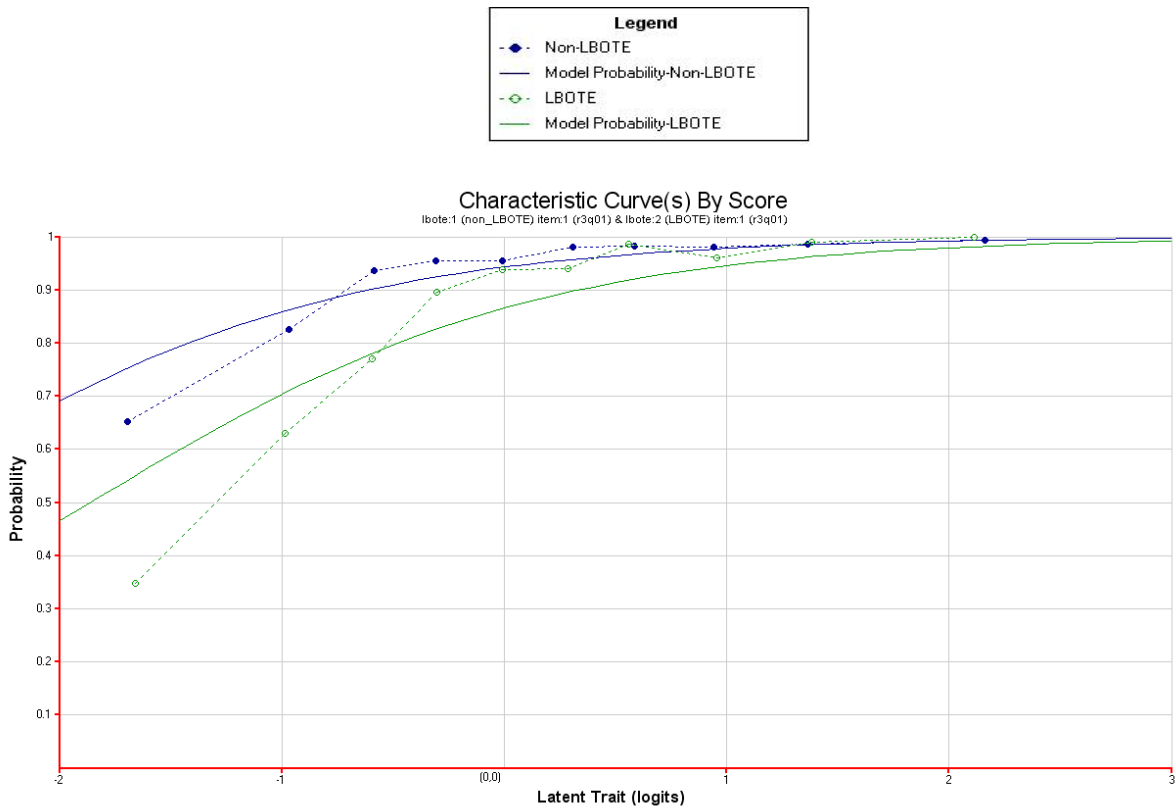
G.2 Centred Item Locations of LBOTE and Non-LBOTE Students Years 3, 5, 7, and 9 Writing (2013)

G.3 Centred Item Locations of LBOTE and Non-LBOTE Students in Spelling (2013)

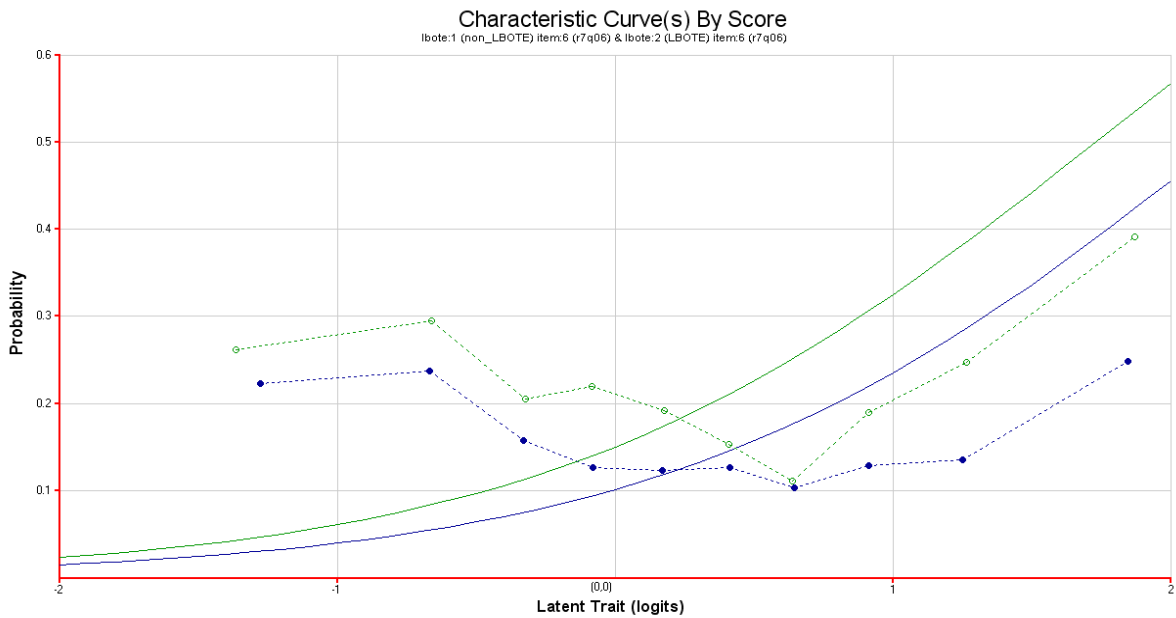
G.4 Centred Item Locations of LBOTE and Non-LBOTE Students in Grammar and Punctuation (2013)

G.5 Centred Item Locations of LBOTE and Non-LBOTE Students in Numeracy (2013)

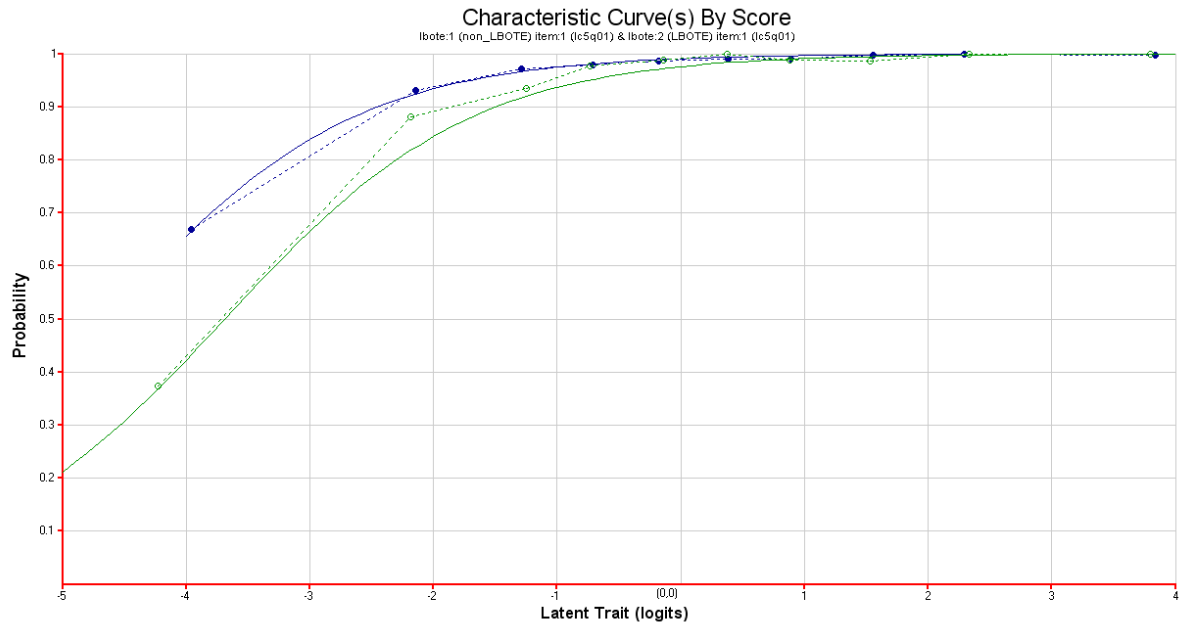
G.6 Item DIF Plots for Items Showing LBOTE DIF



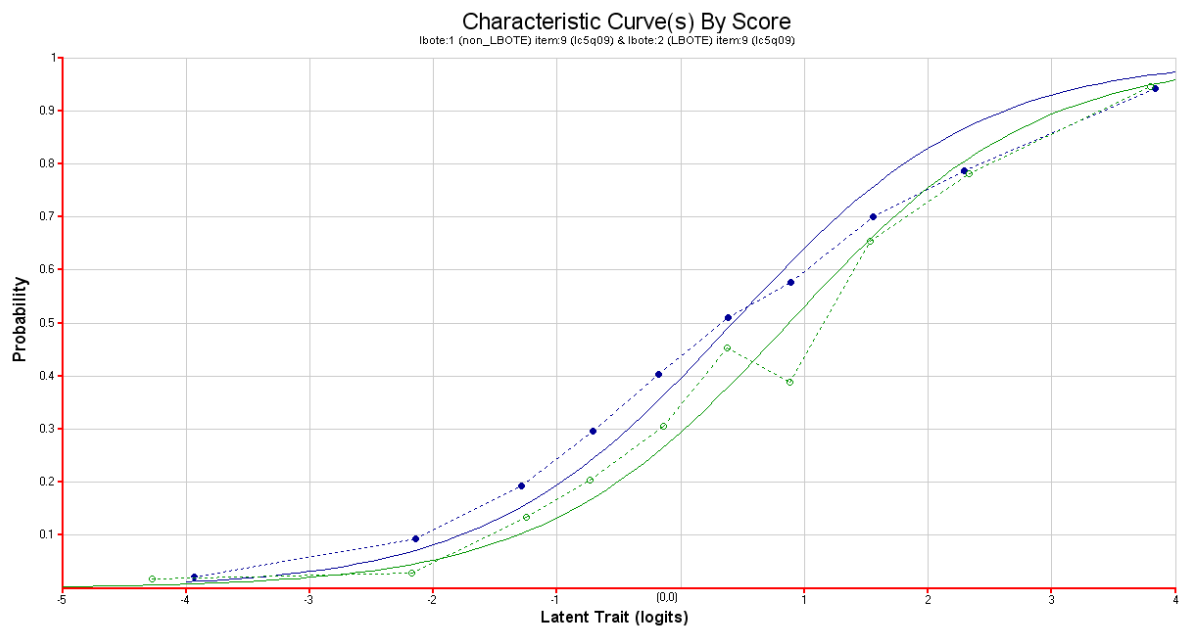
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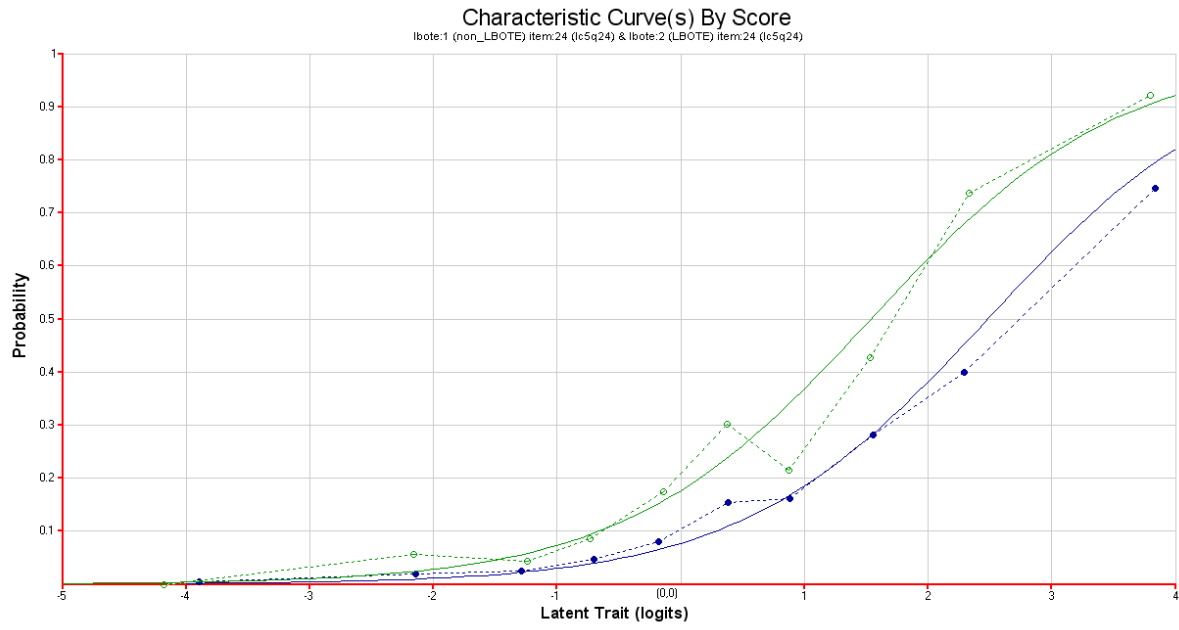
Item r7q06



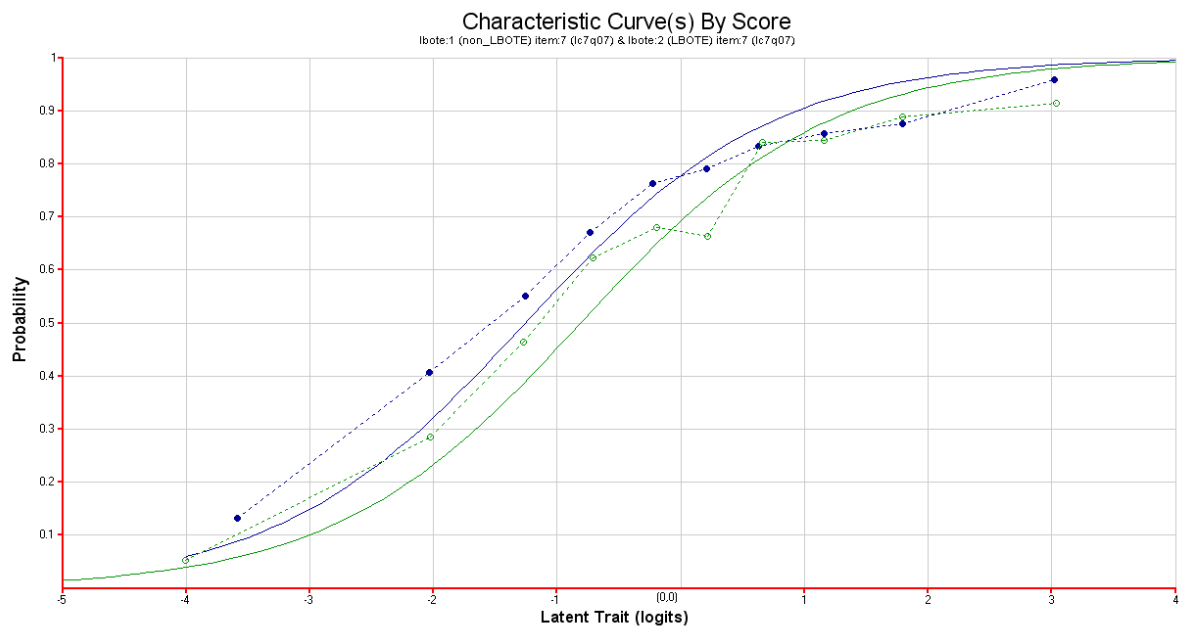
Item lc5q01



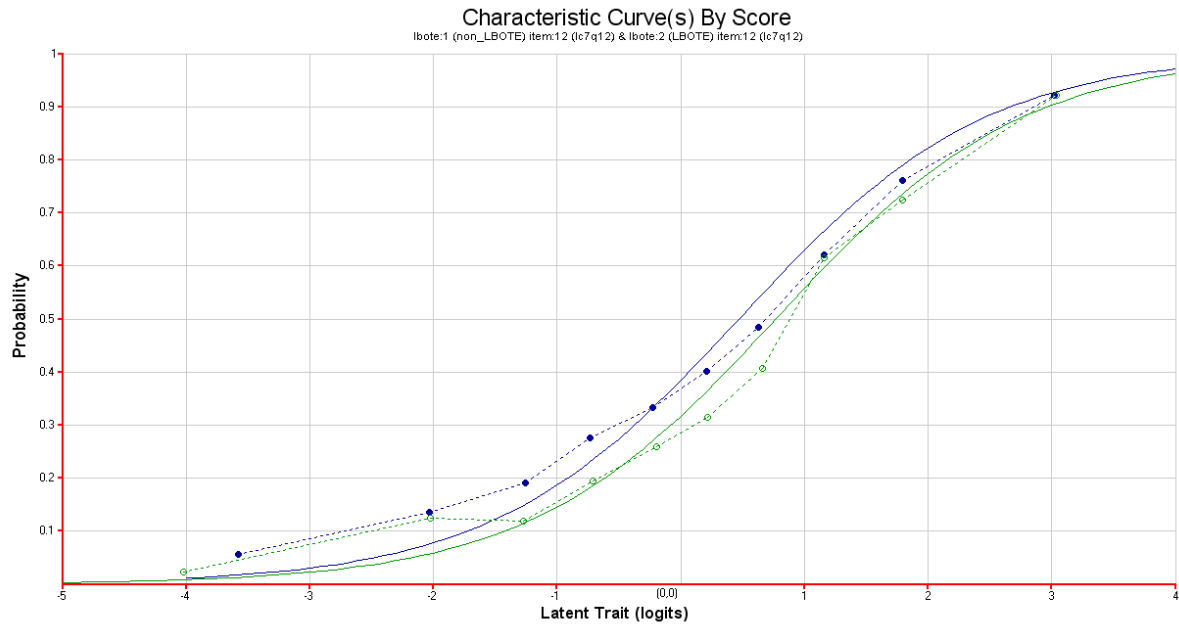
Item lc5q09



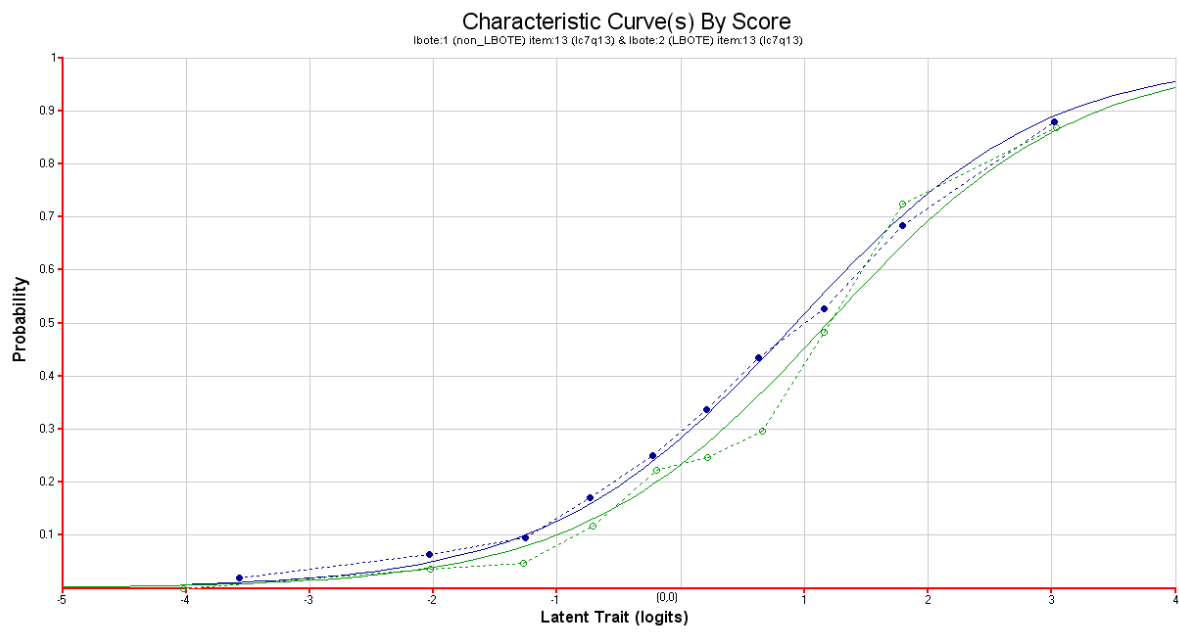
Item lc5q24



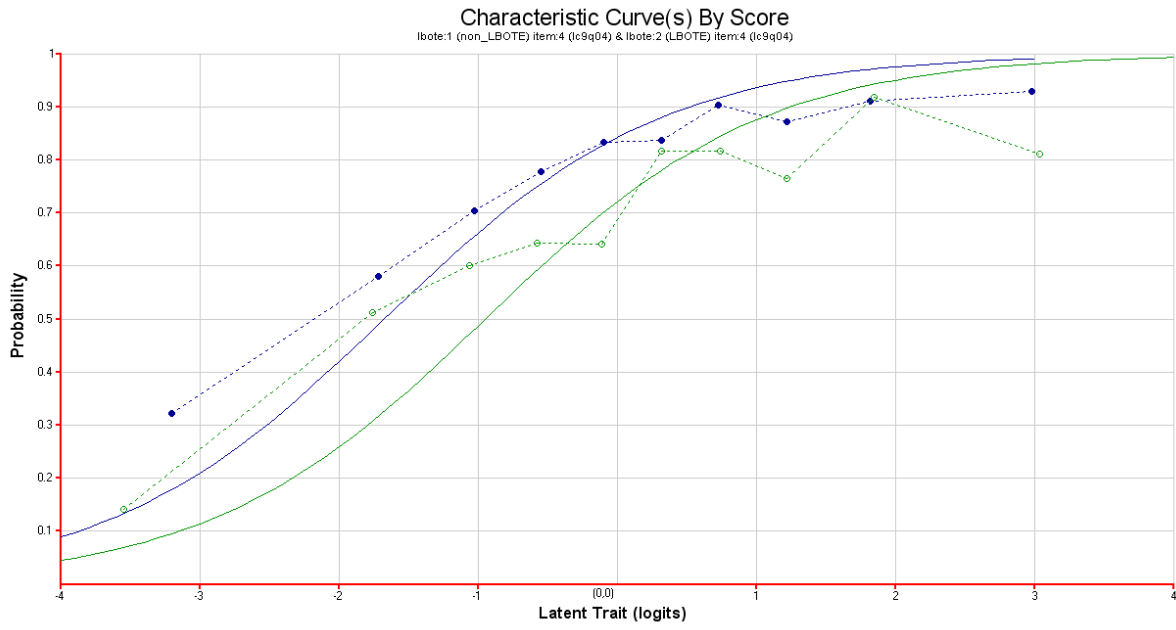
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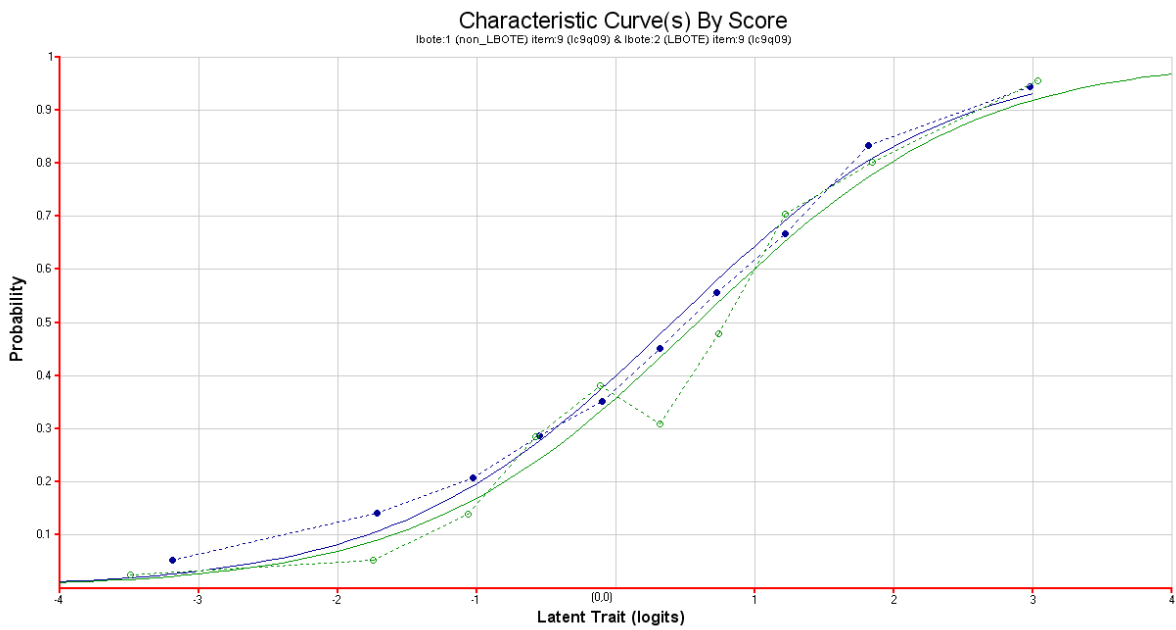
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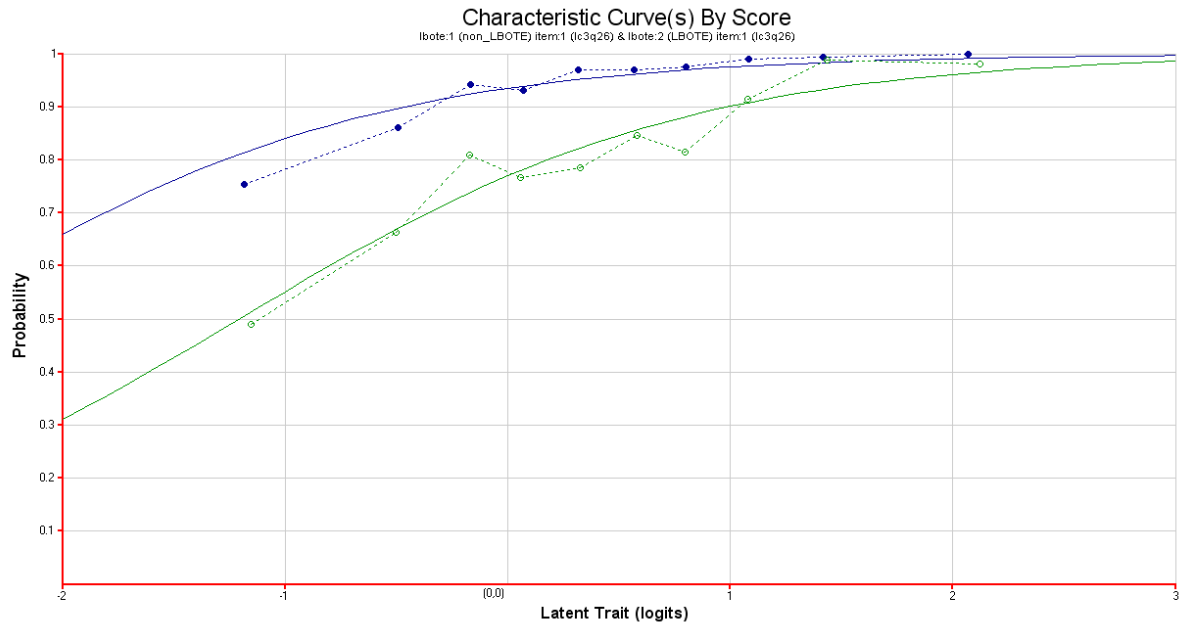
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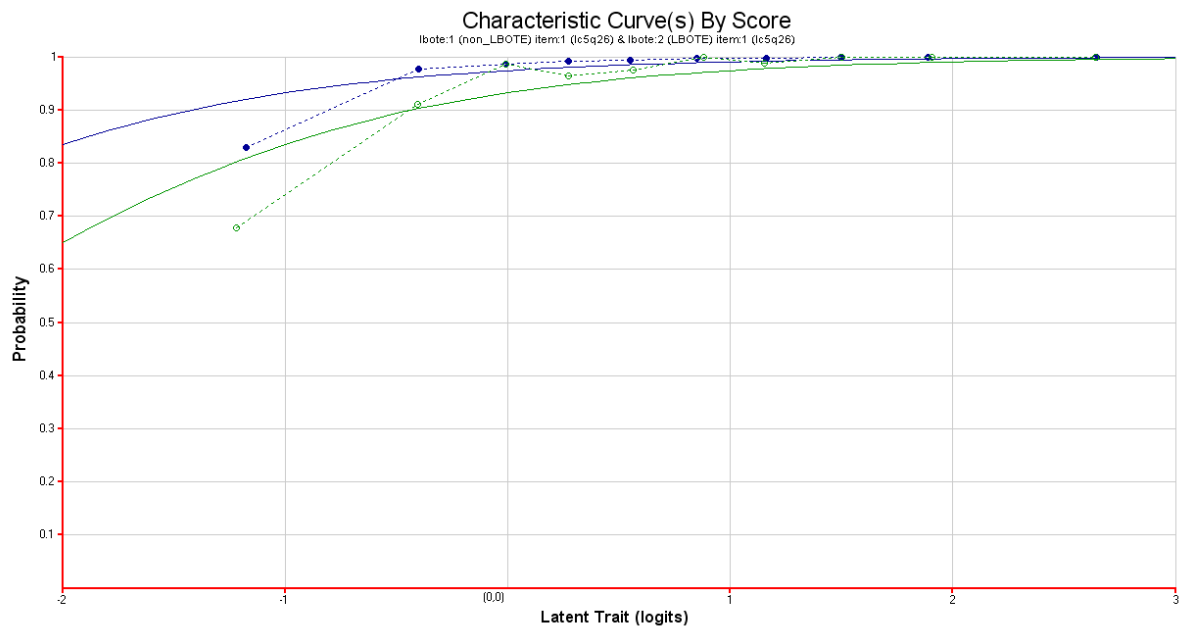
Item lc9q04



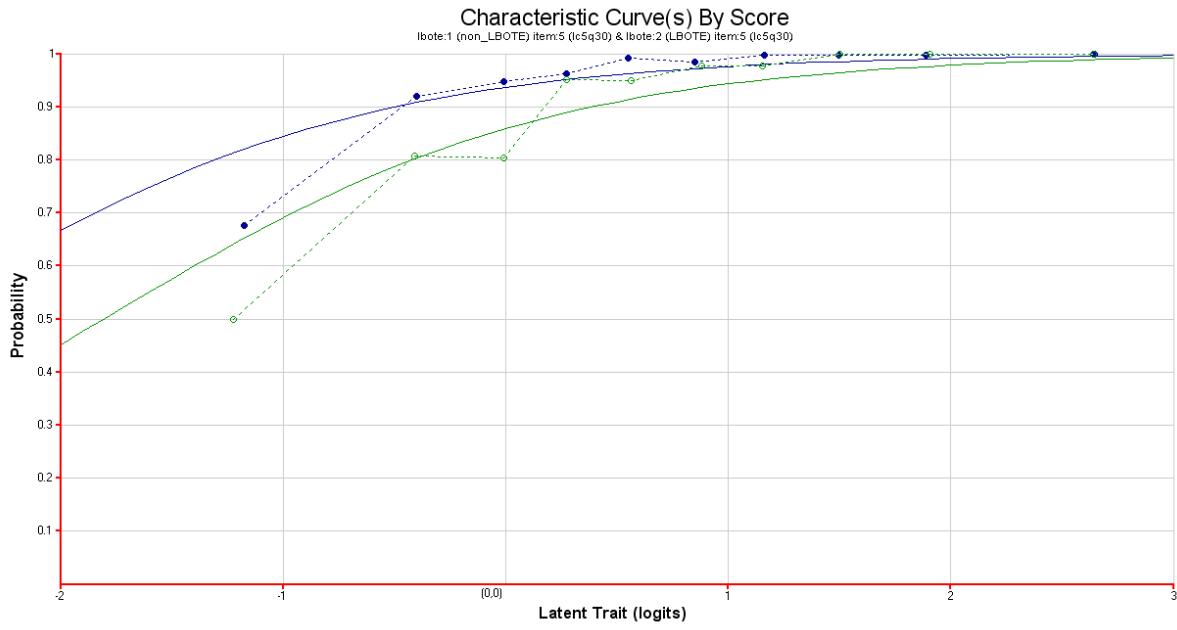
Item lc9q09



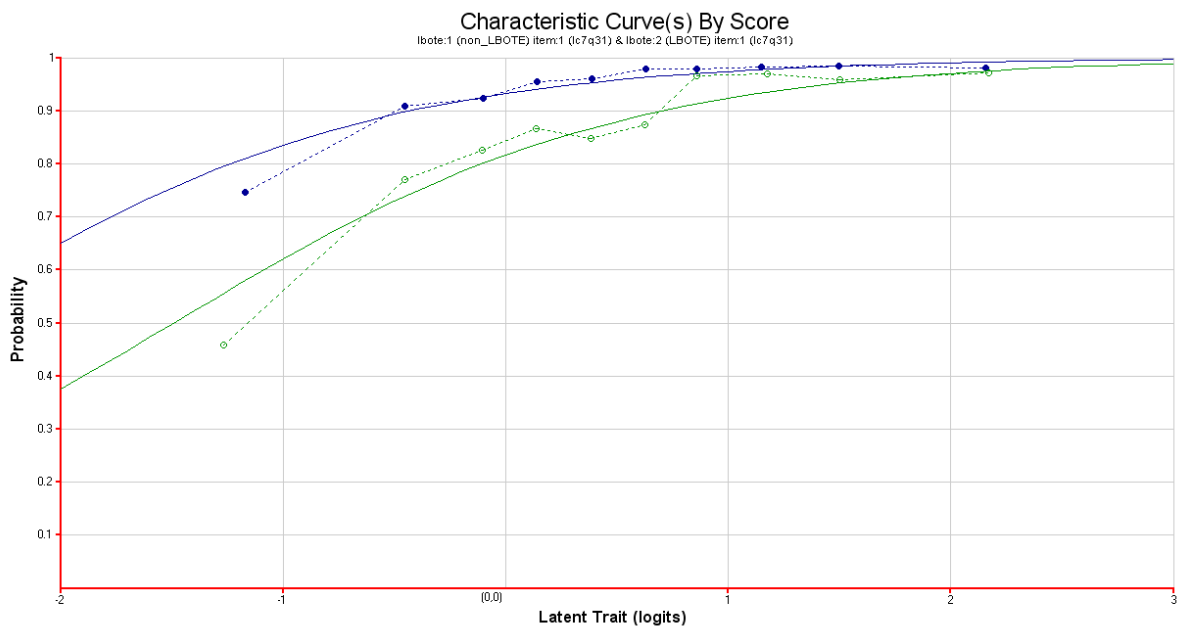
Item lc3q26



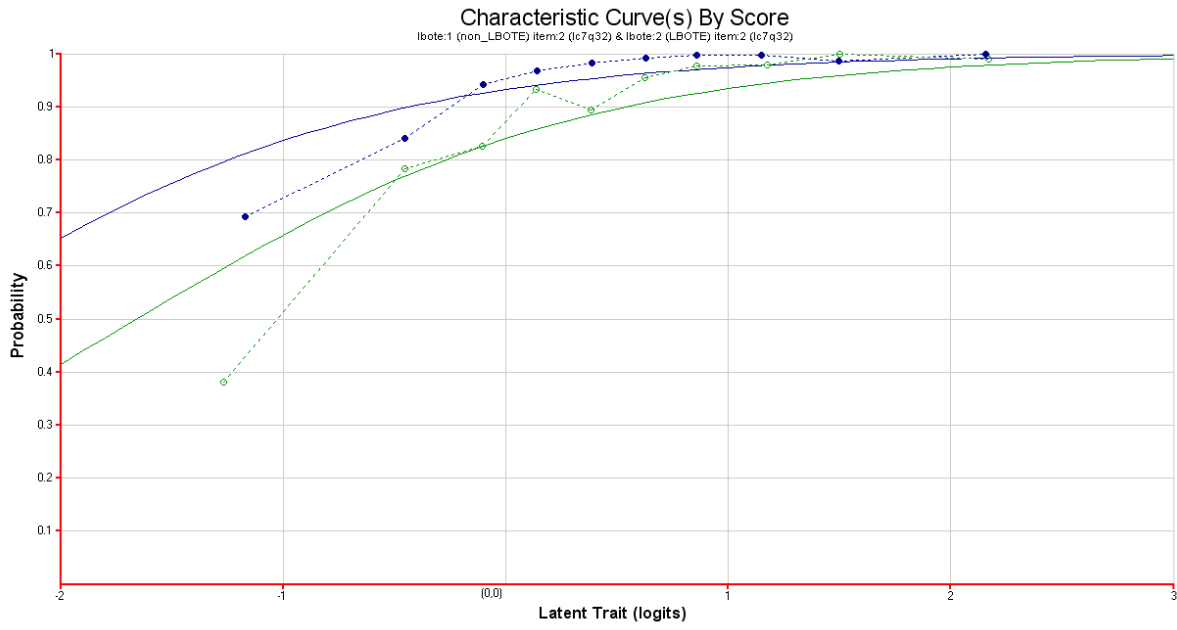
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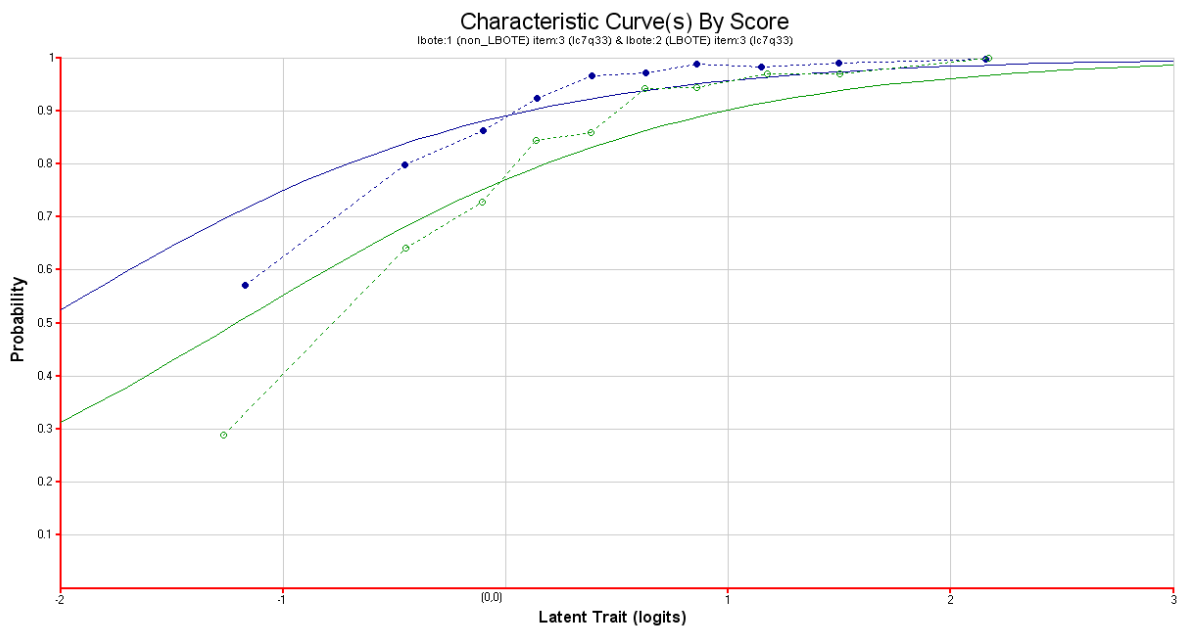
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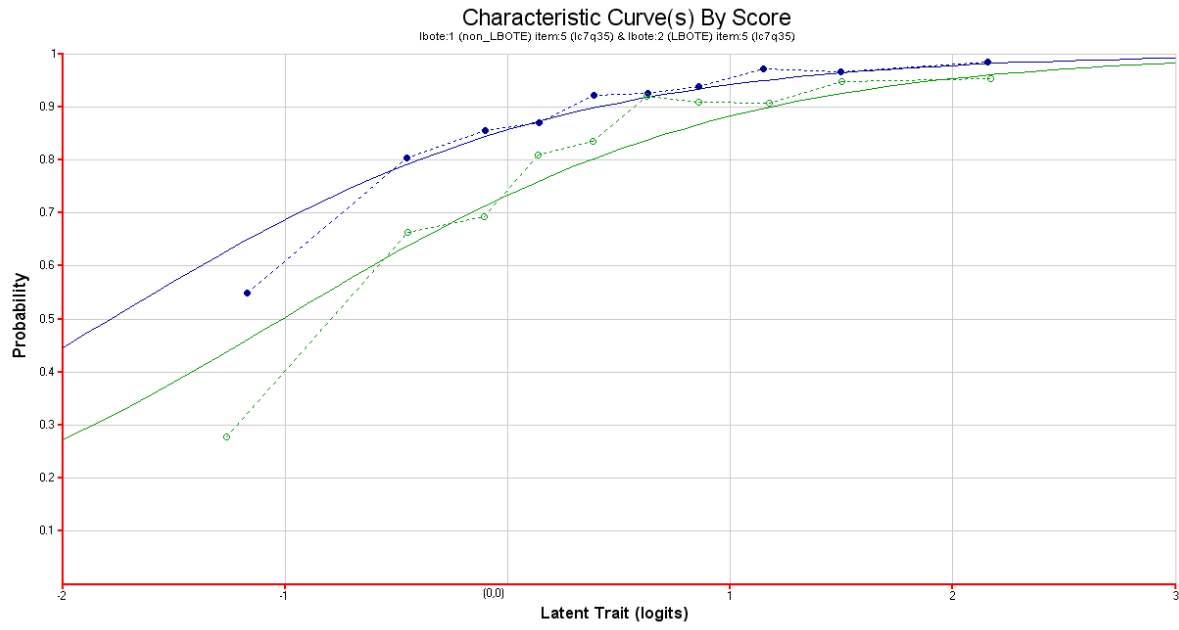
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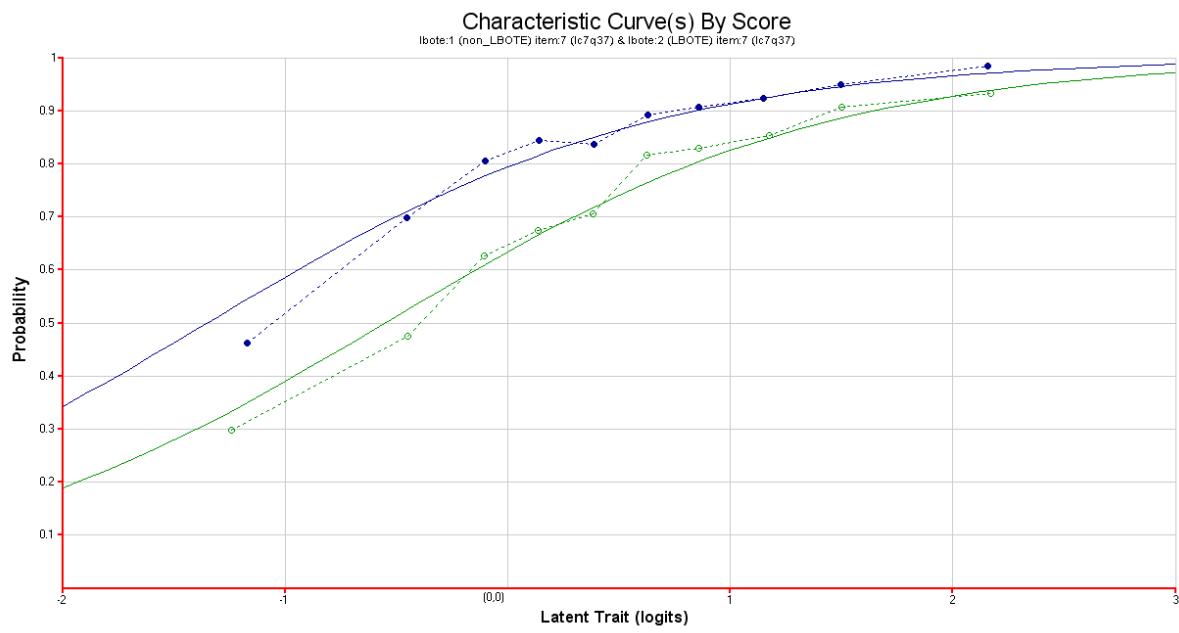
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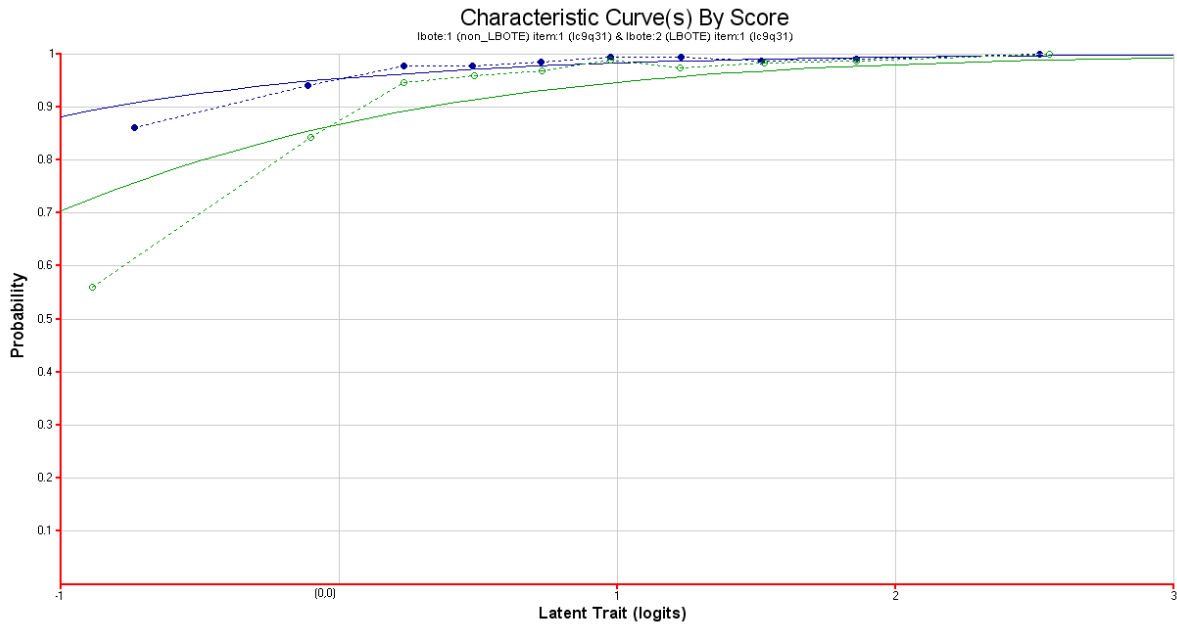
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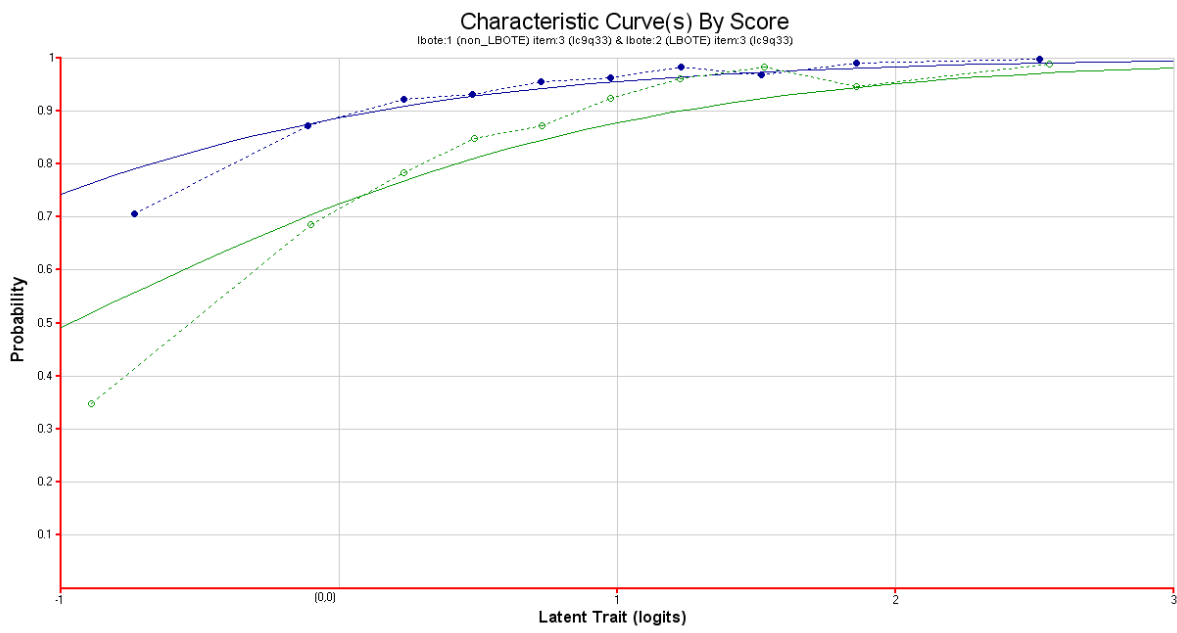
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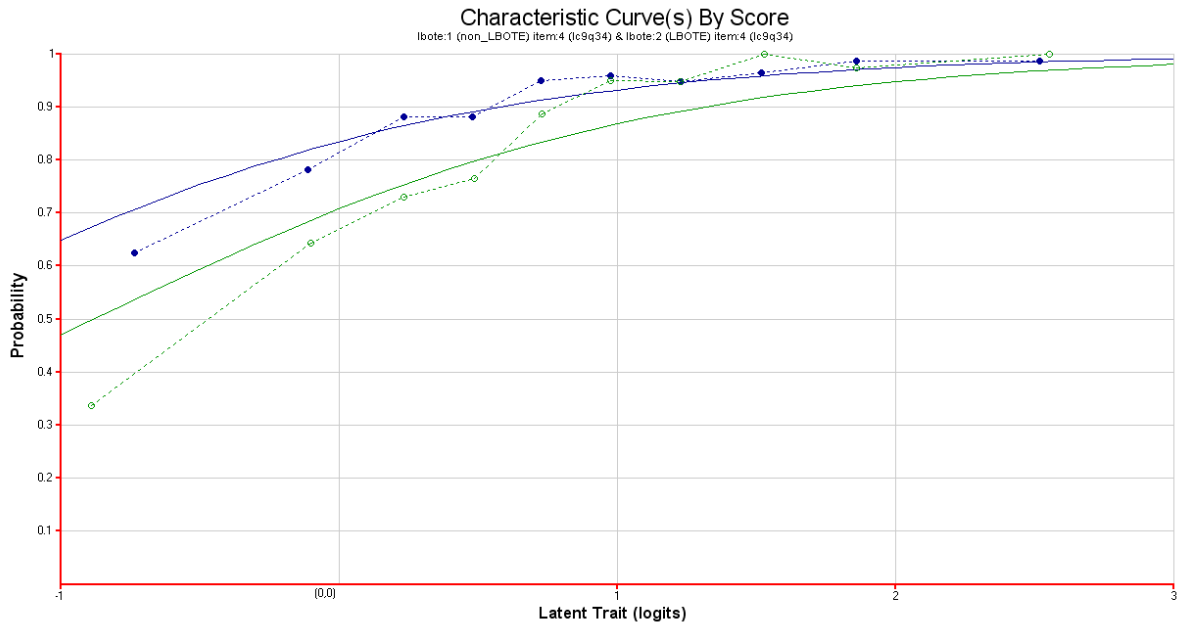
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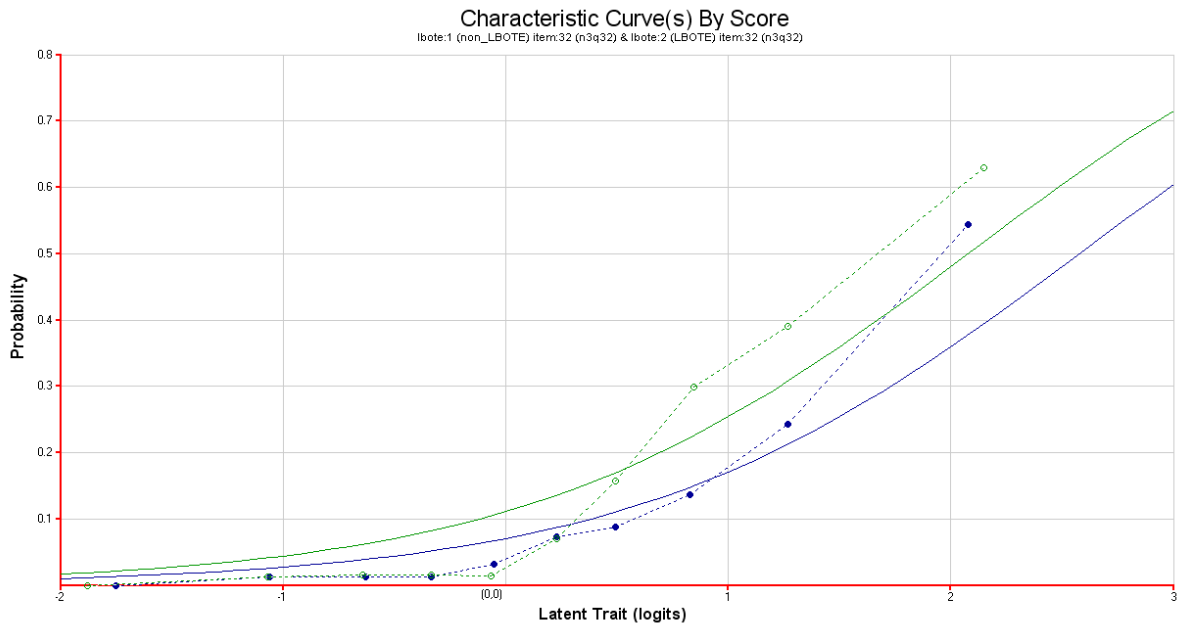
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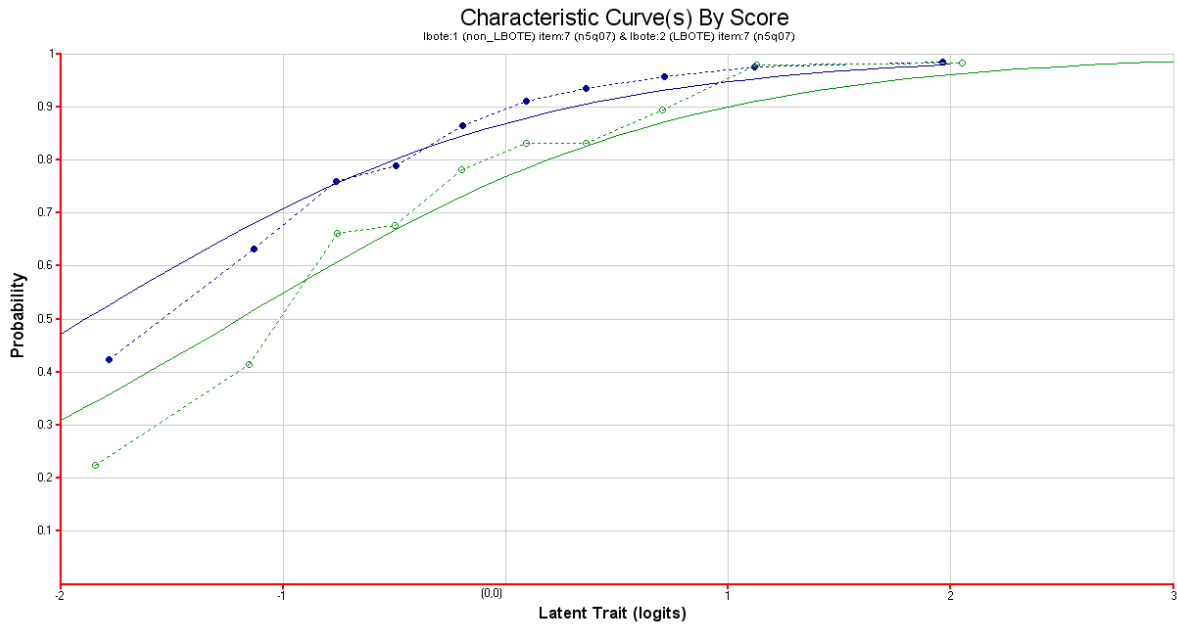
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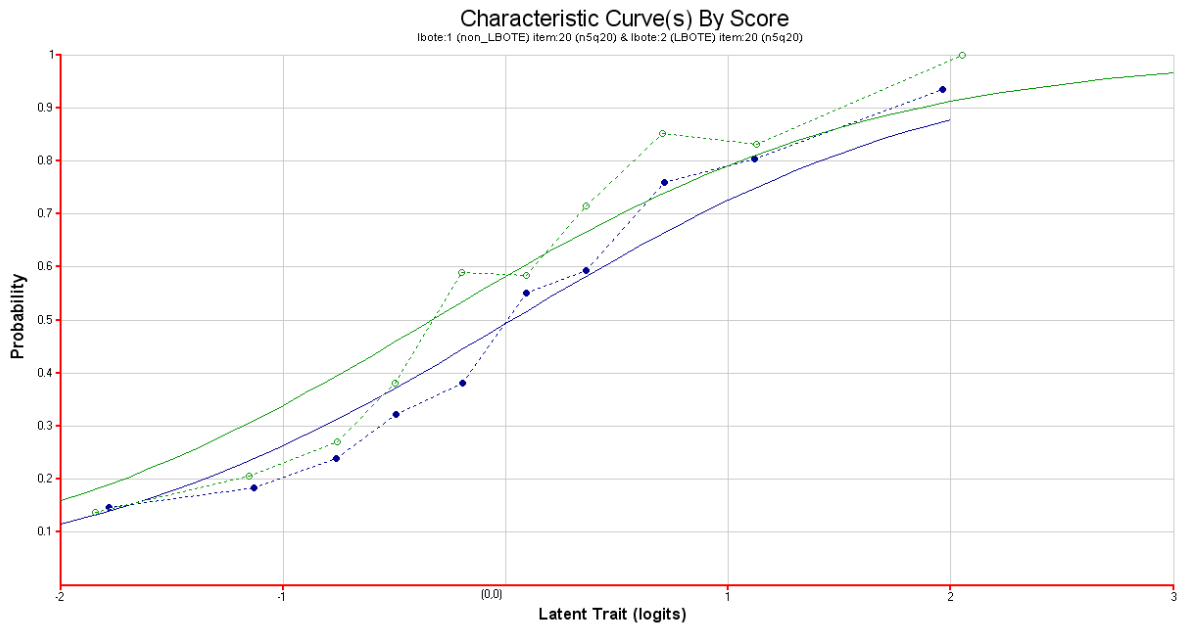
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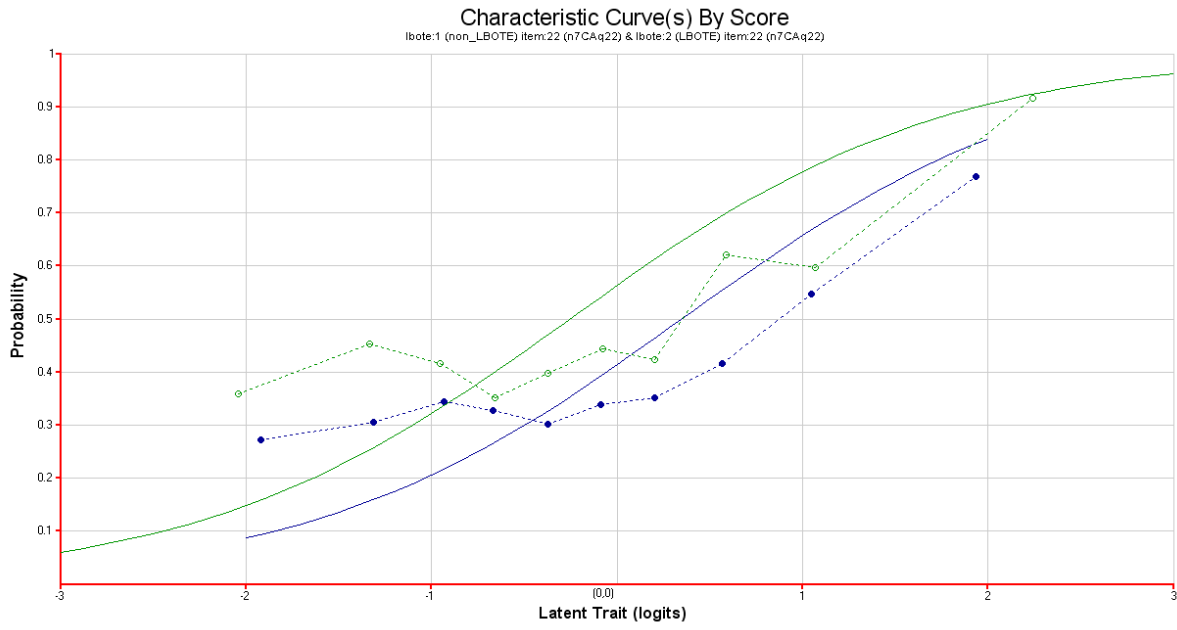
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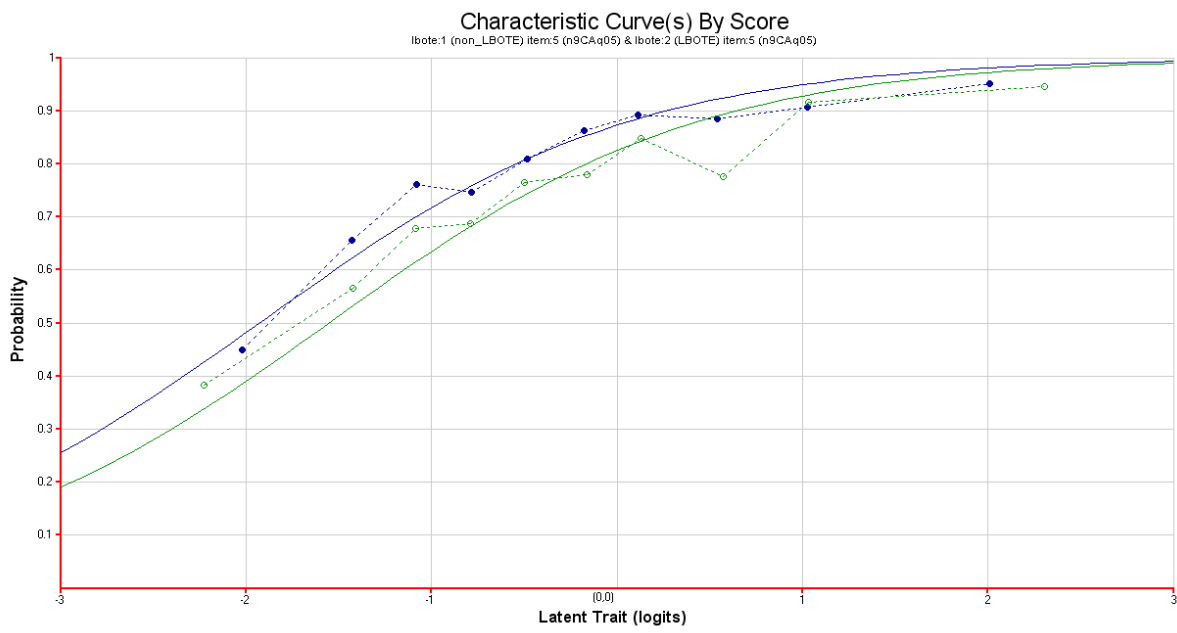
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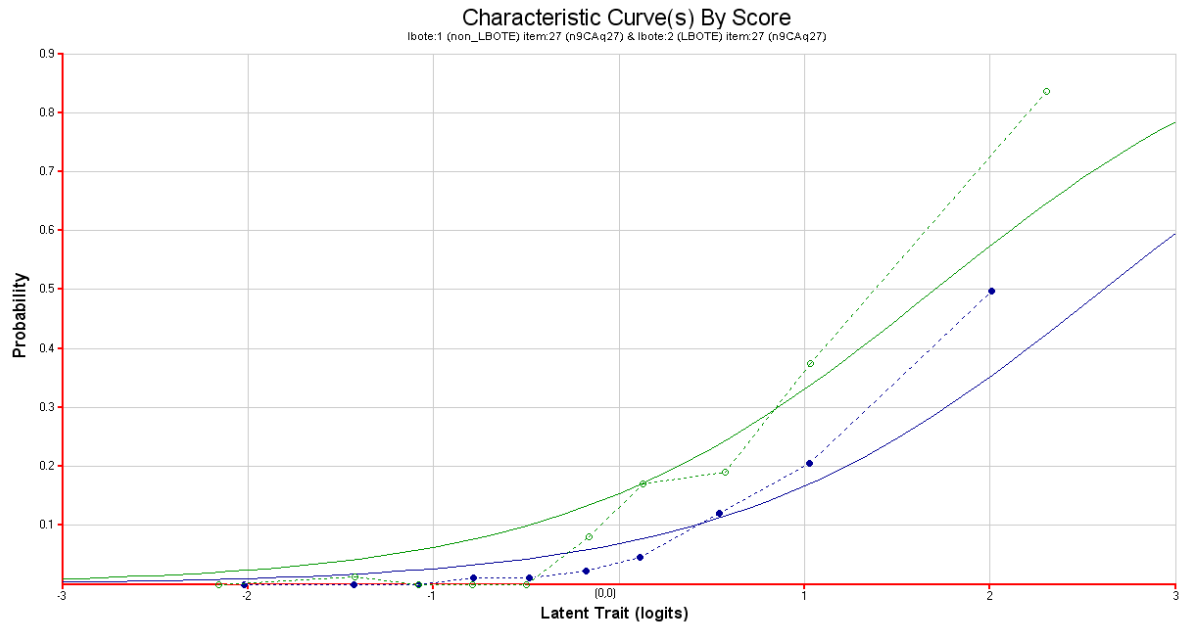
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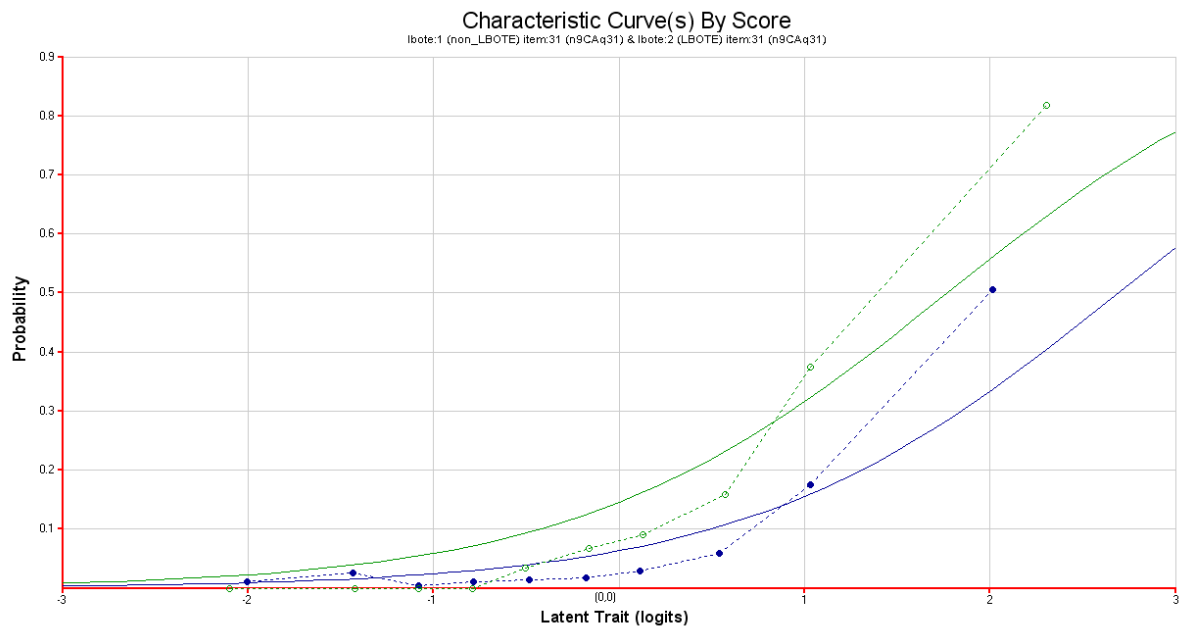
Item n7CAq22



Item n9CAq05



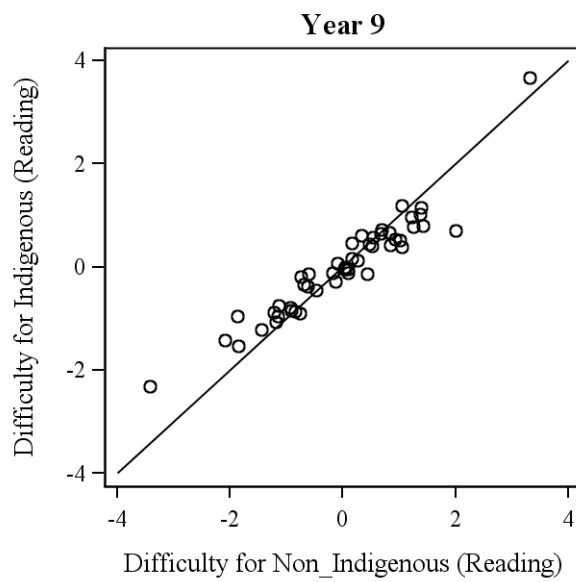
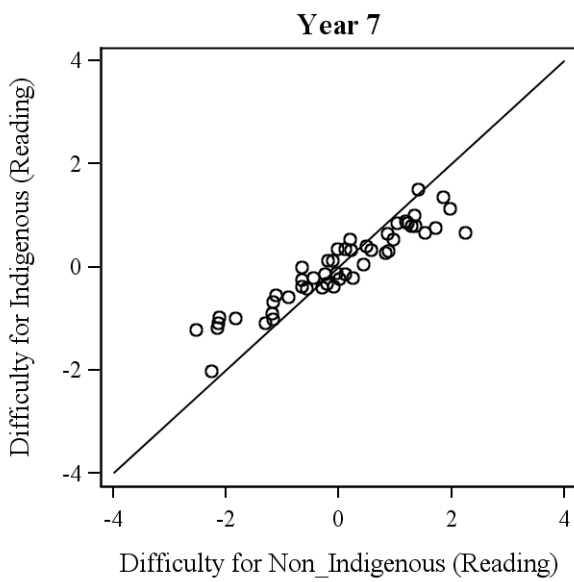
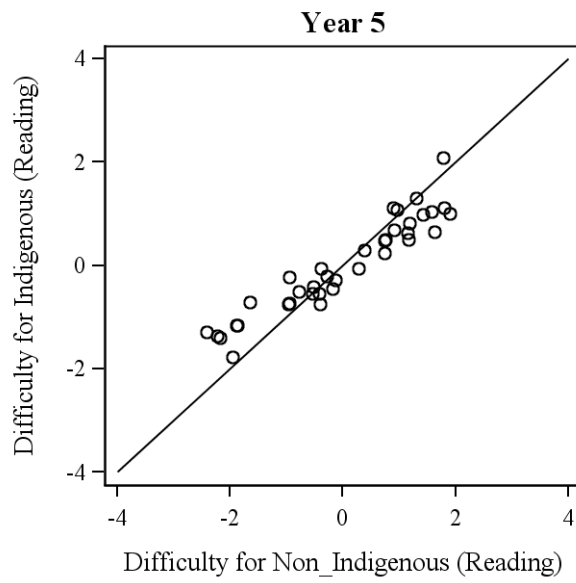
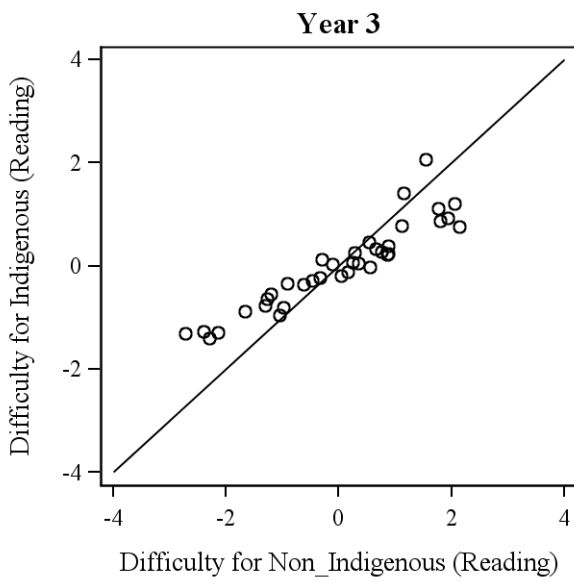
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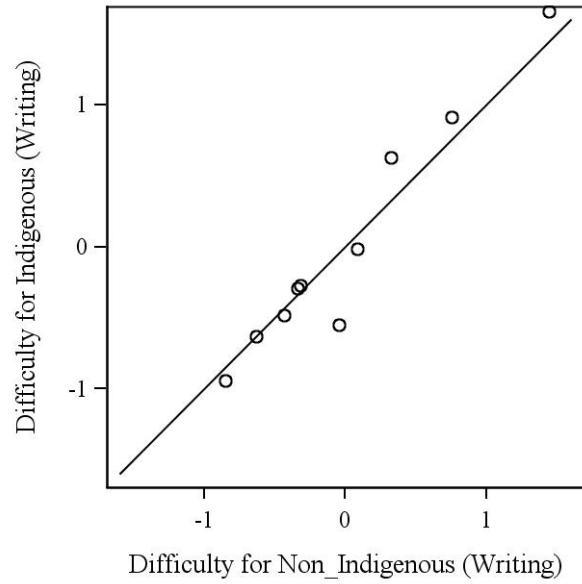
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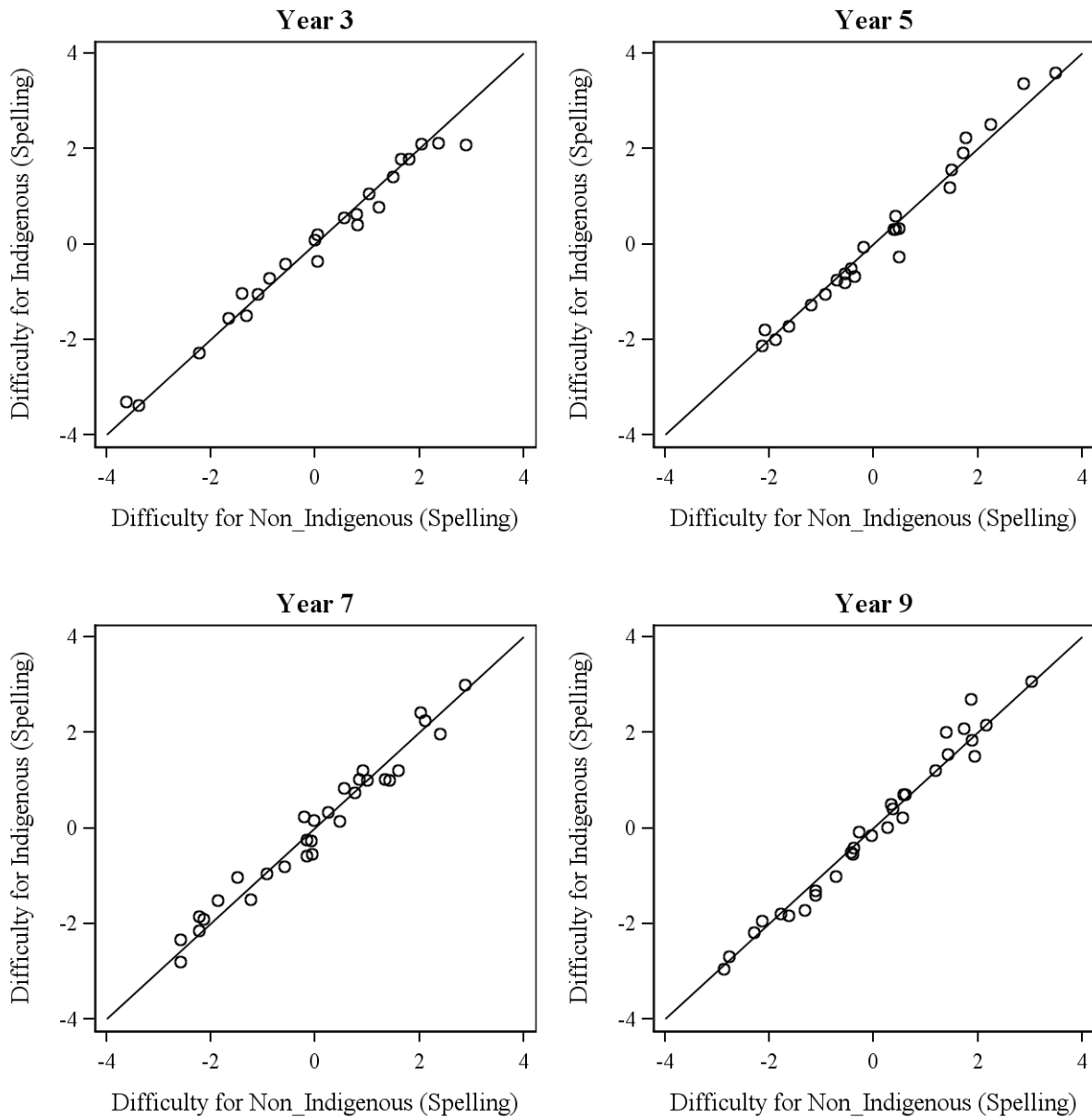
APPENDIX H. INDIGENOUS STATUS DIF ANALYSIS

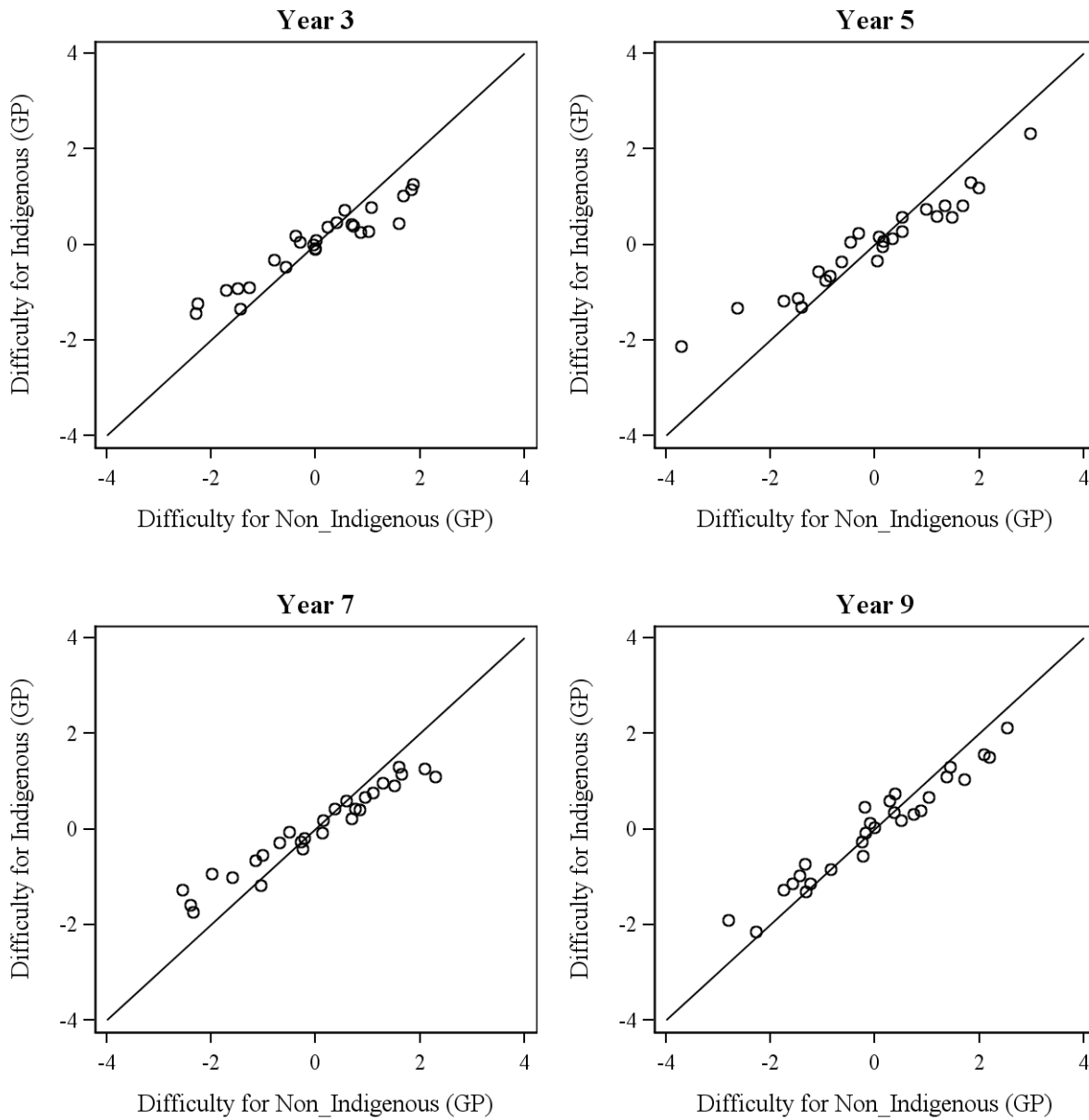
H.1 Centred Item Locations of Indigenous and Non-Indigenous Students in Reading (2013)

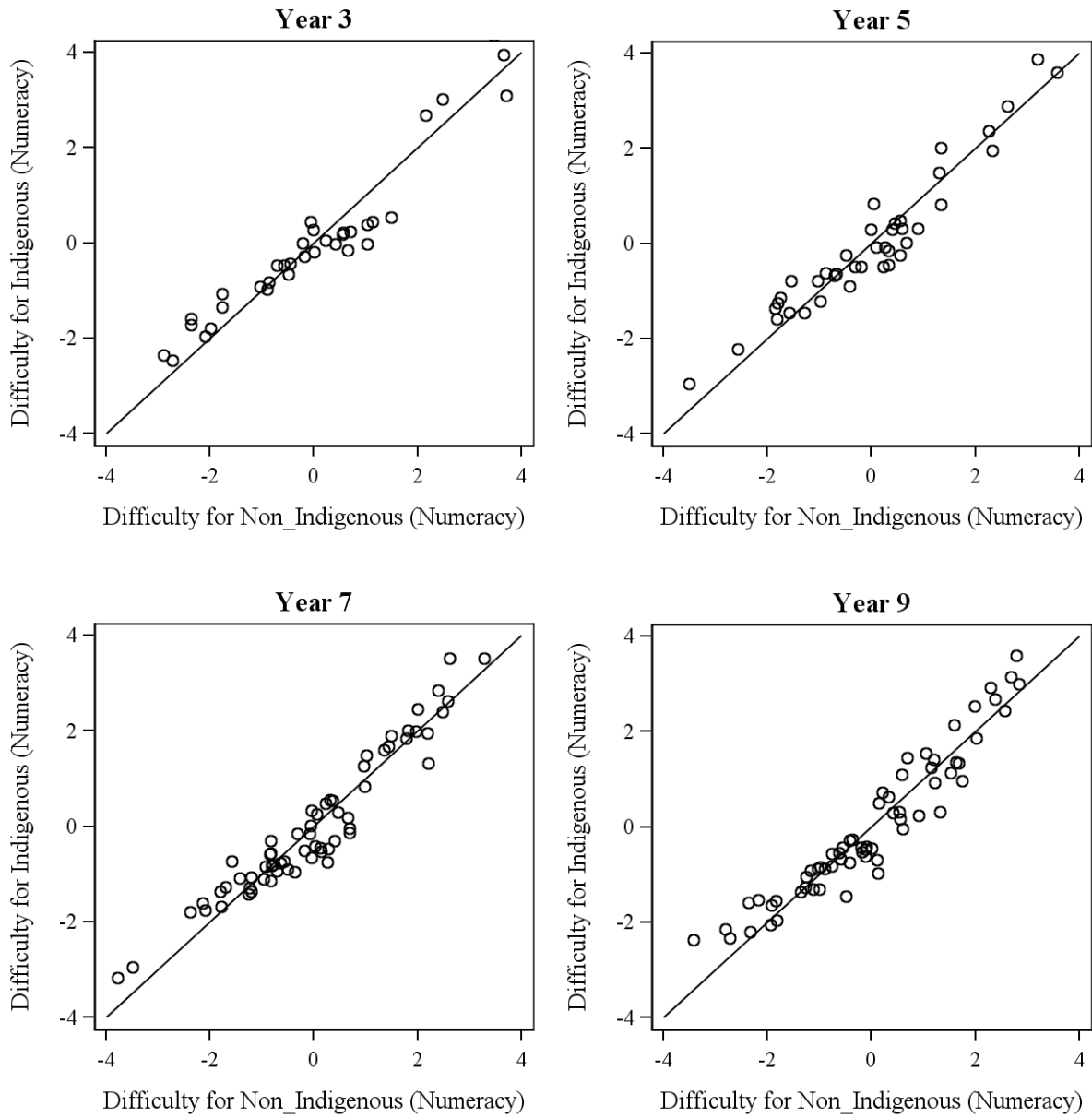


H.2 Centred Item Locations of Indigenous and Non-Indigenous Students Years 3, 5, 7, and 9 Writing (2013)

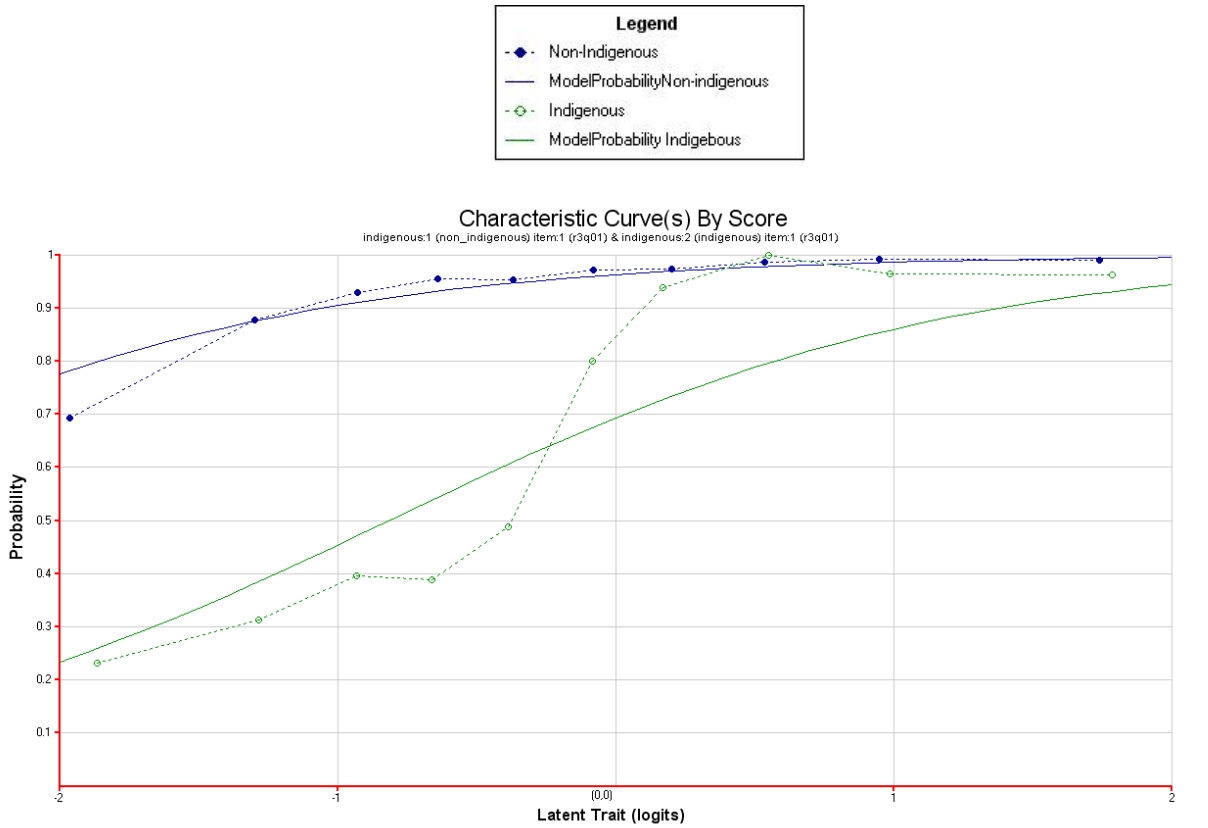


H.3 Centred Item Locations of Indigenous and Non-Indigenous Students in Spelling (2013)

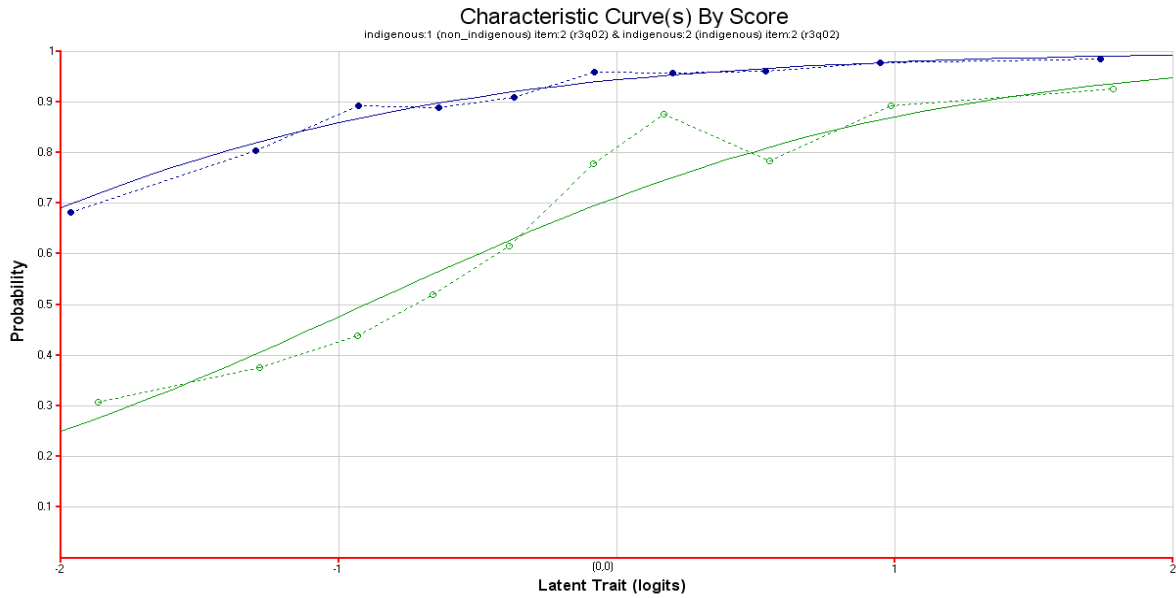
H.4 Centred Item Locations of Indigenous and Non-Indigenous Students in Grammar and Punctuation (2013)

H.5 Centred Item Locations of Indigenous and Non-Indigenous Students in Numeracy (2013)

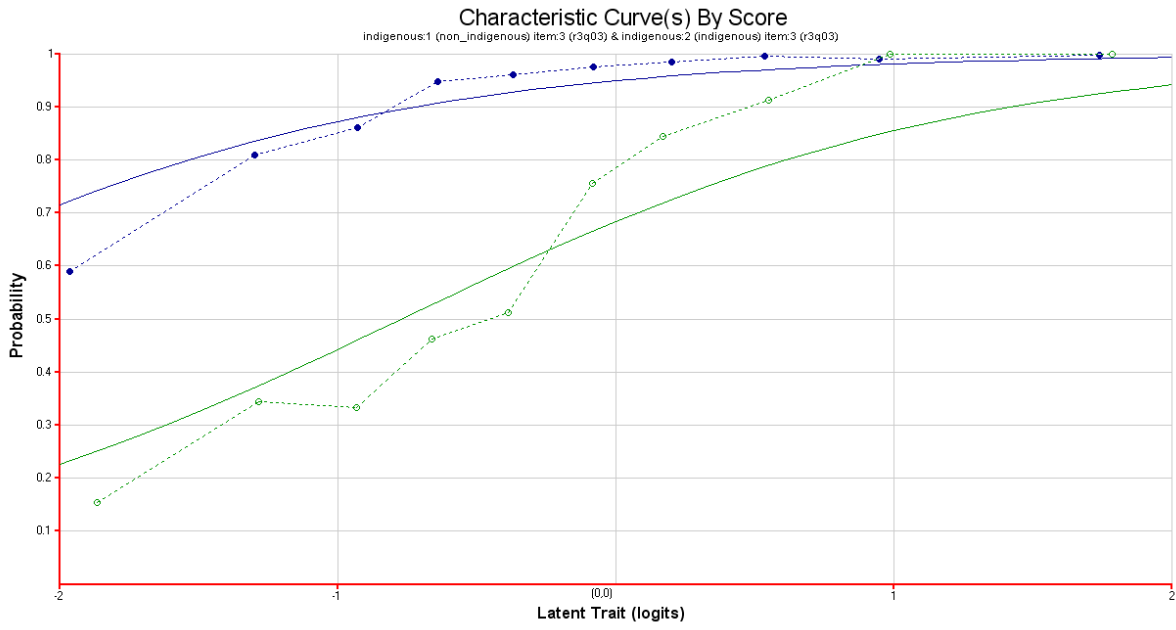
H.6 Item DIF Plots for Items Showing Indigenous Status DIF



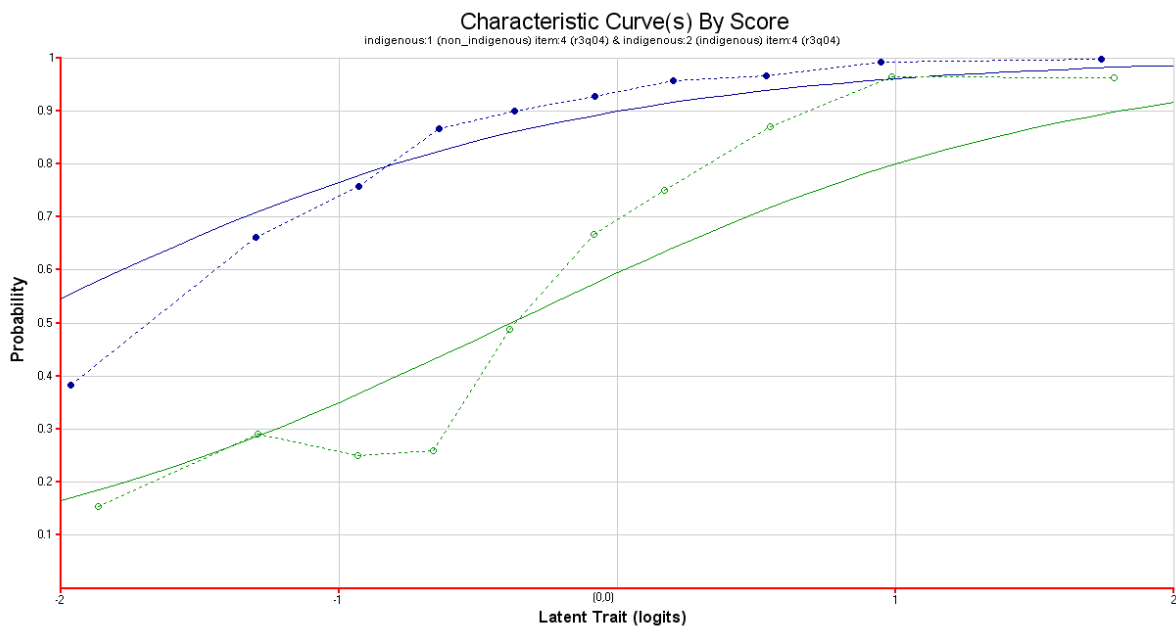
Item r3q01



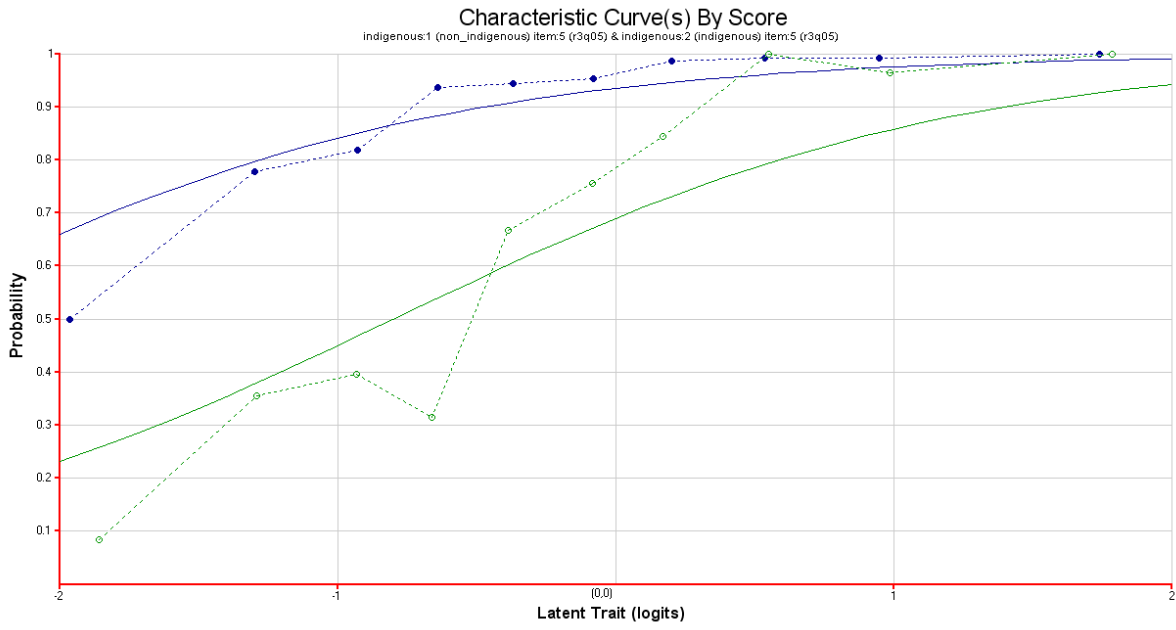
Item r3q02



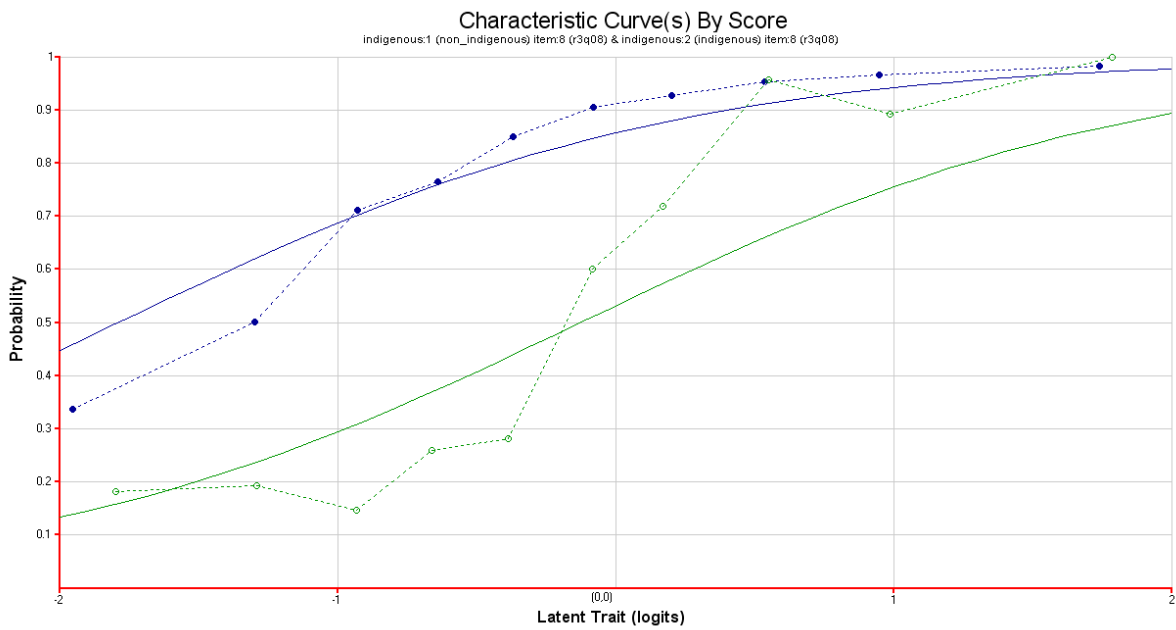
Item r3q03



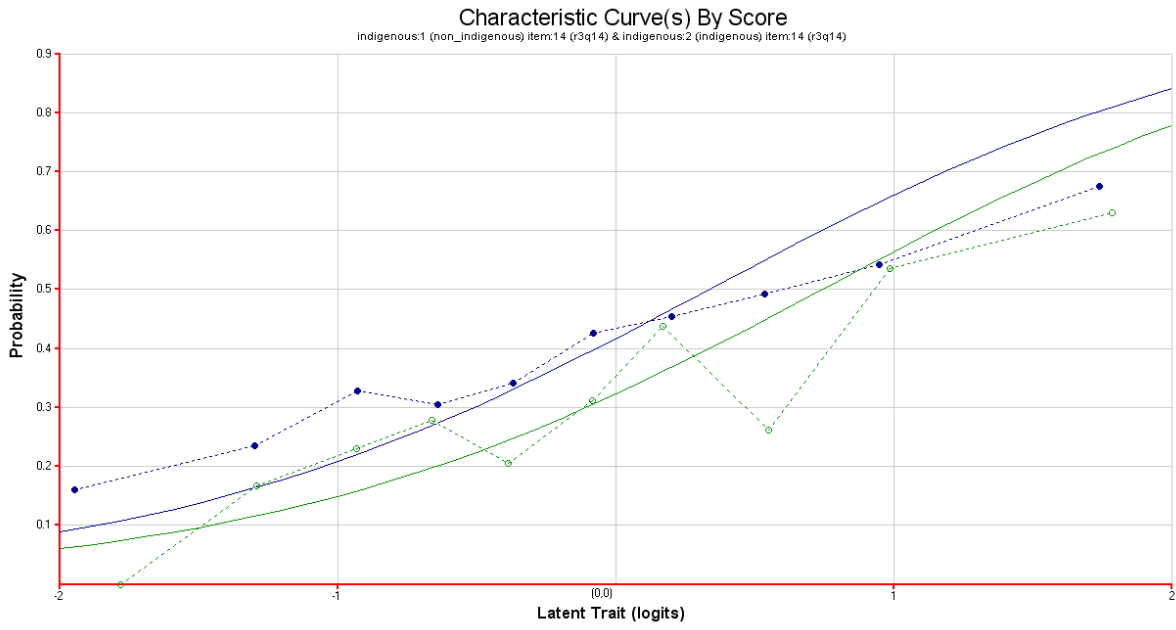
Item r3q04



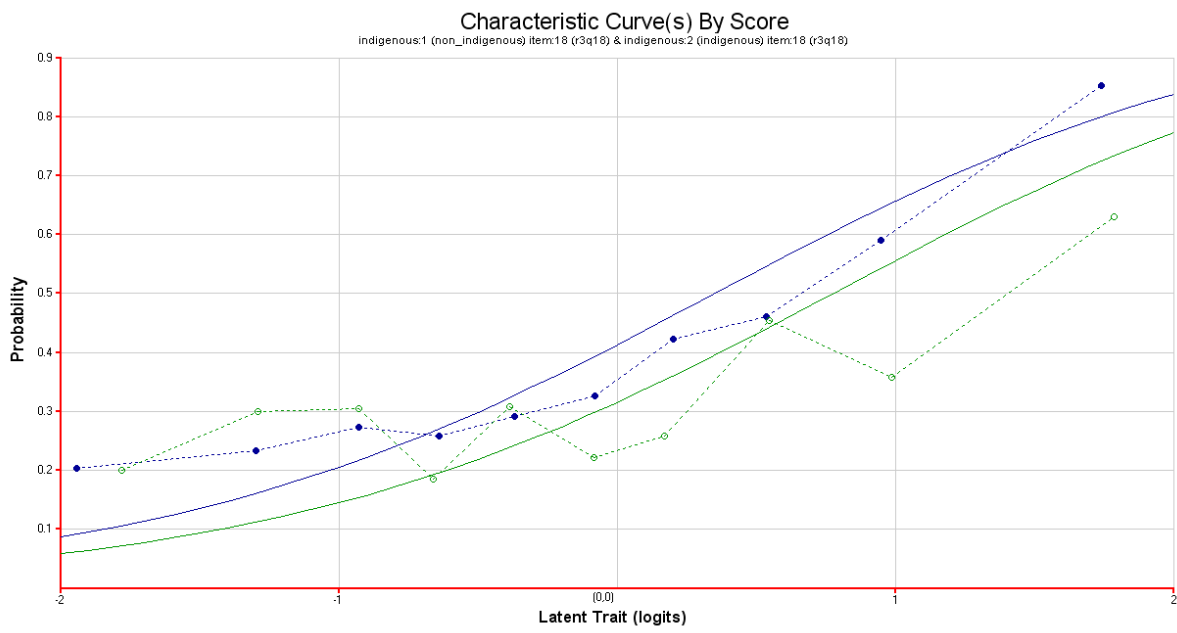
Item r3q05



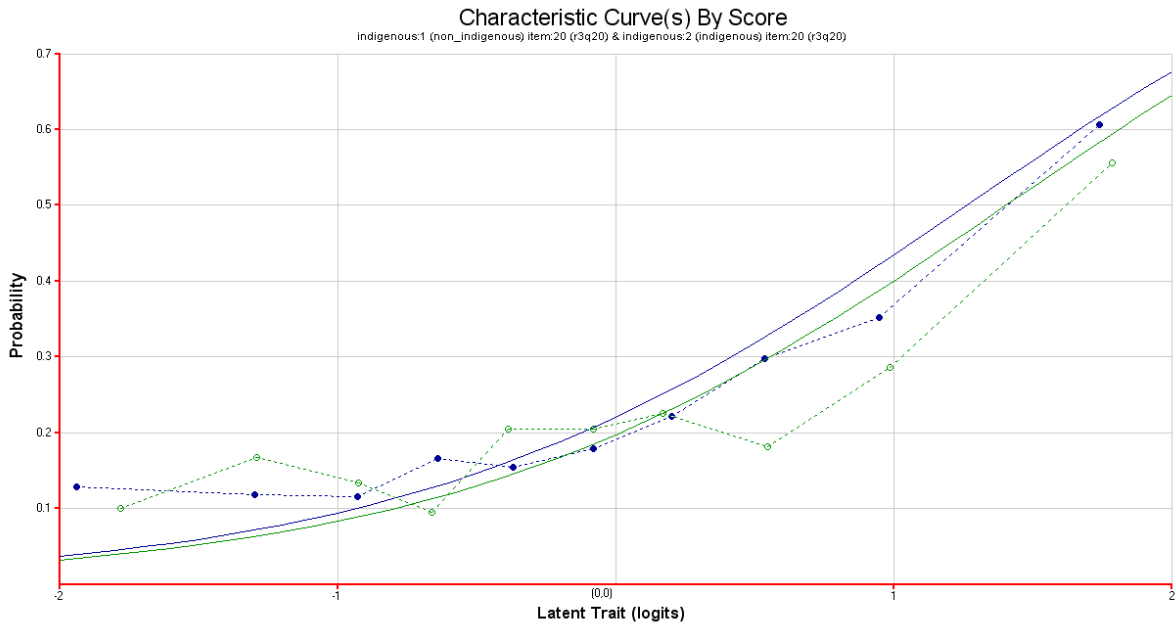
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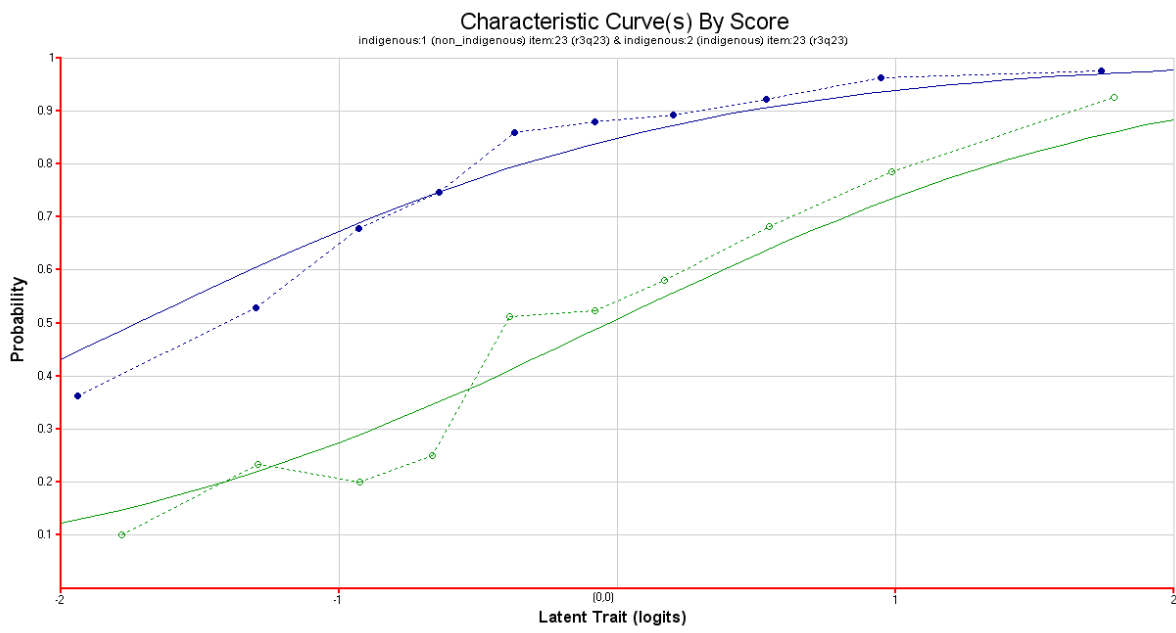
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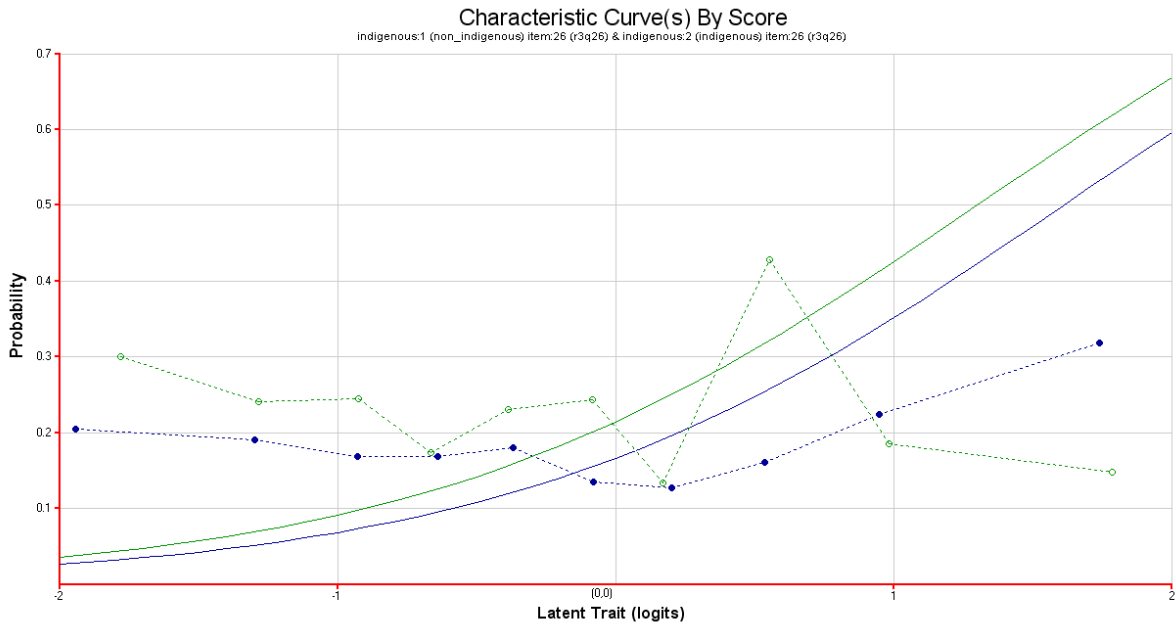
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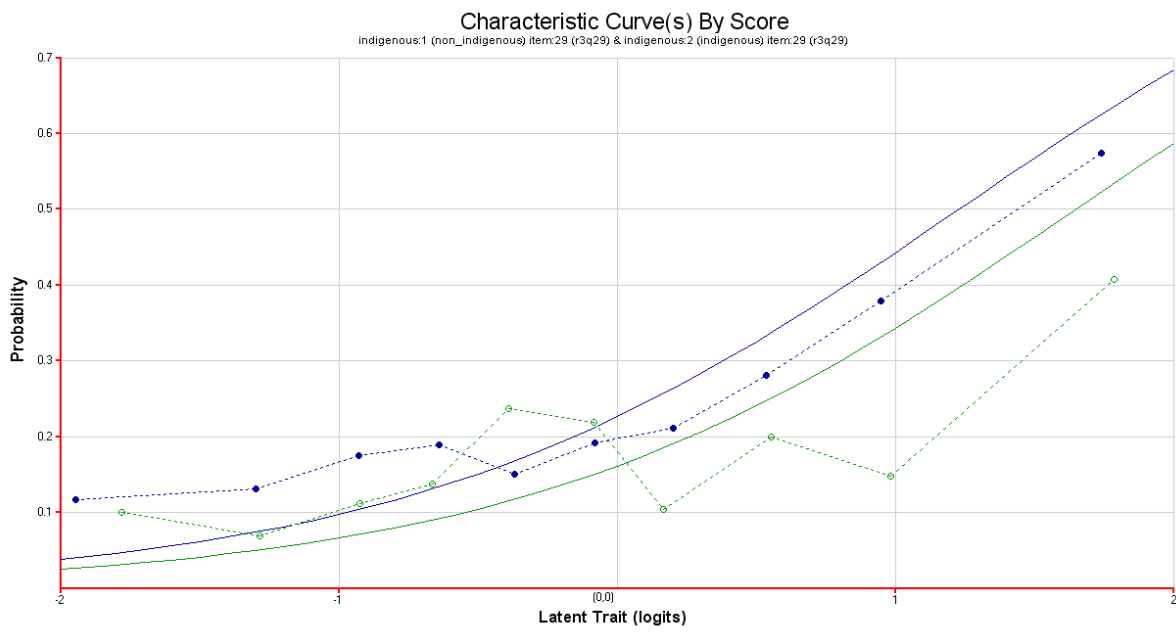
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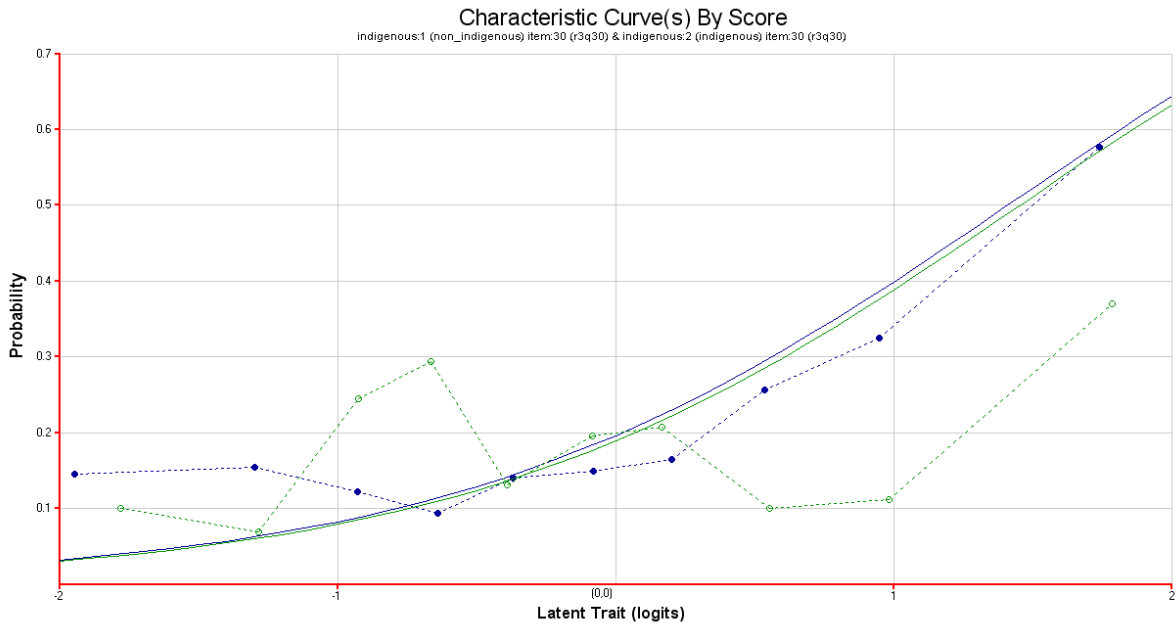
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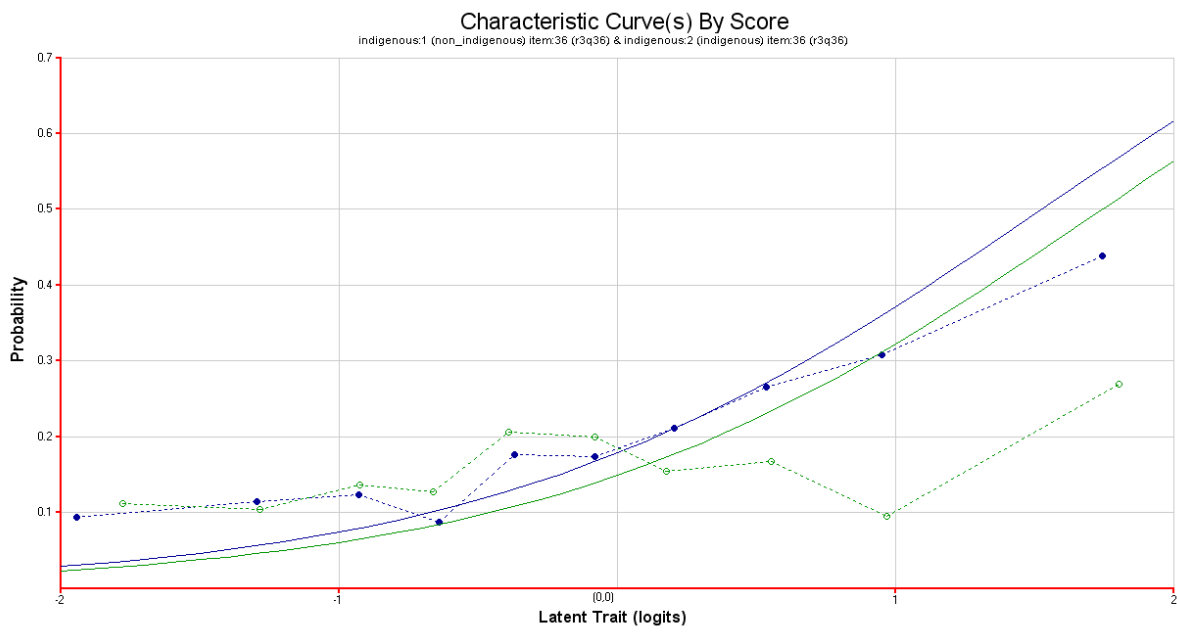
Item r3q26



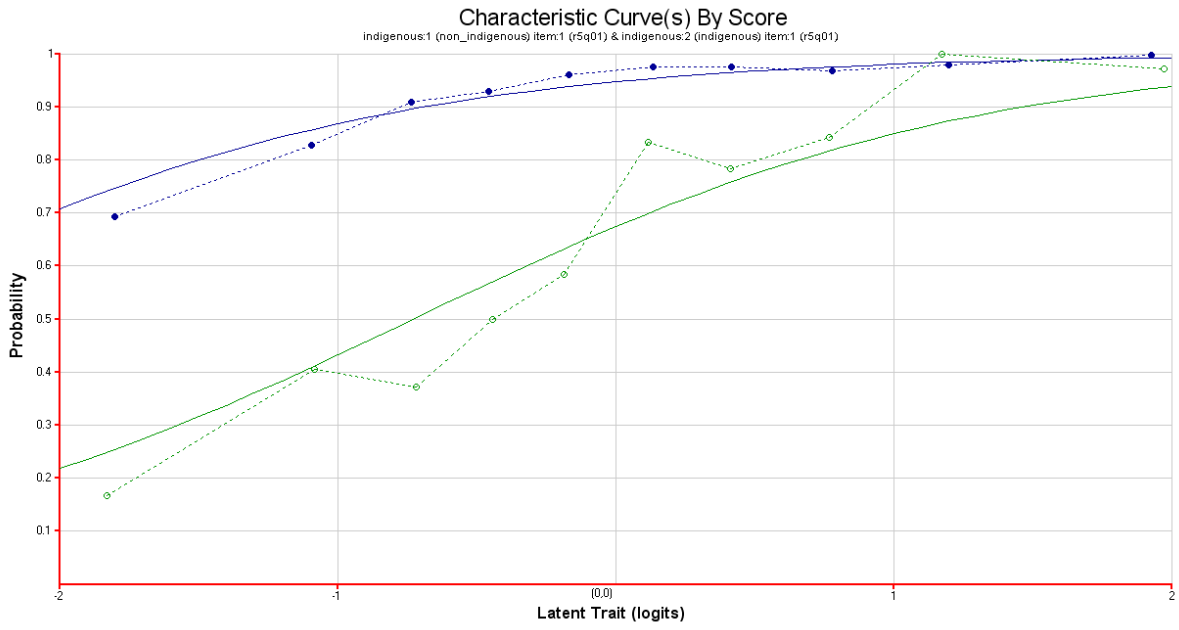
Item r3q29



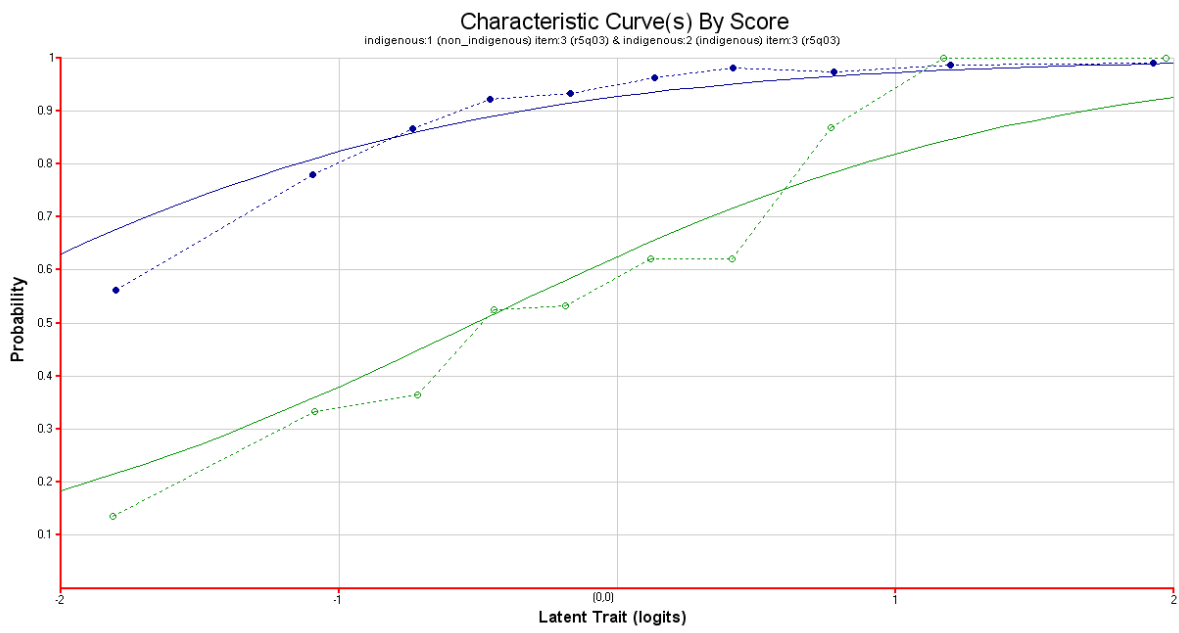
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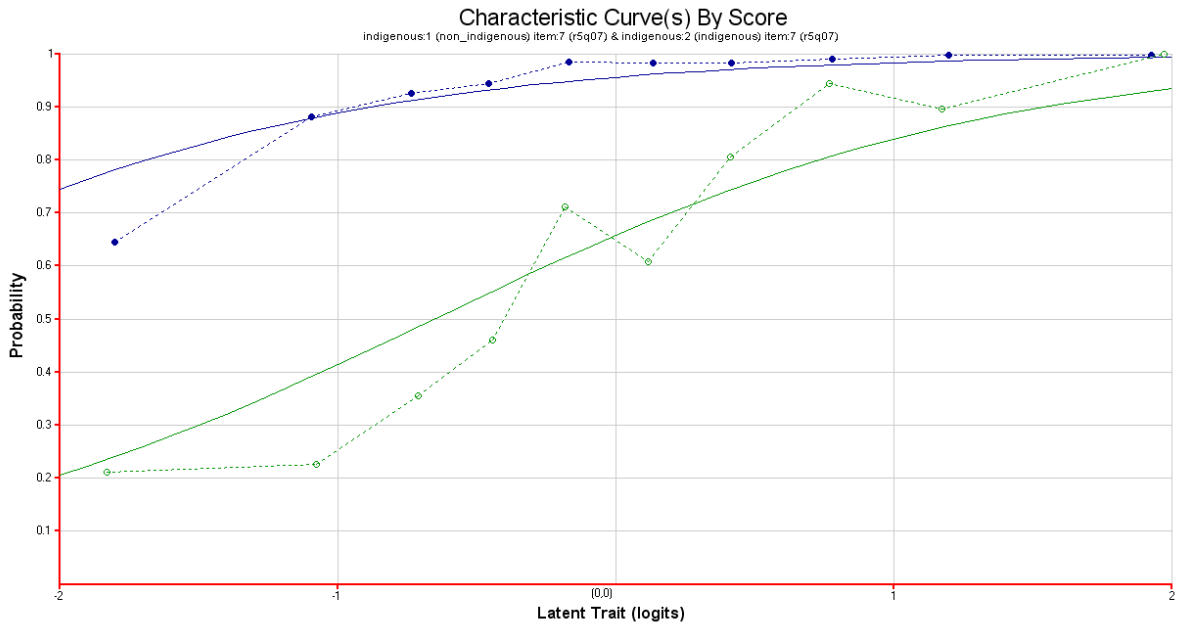
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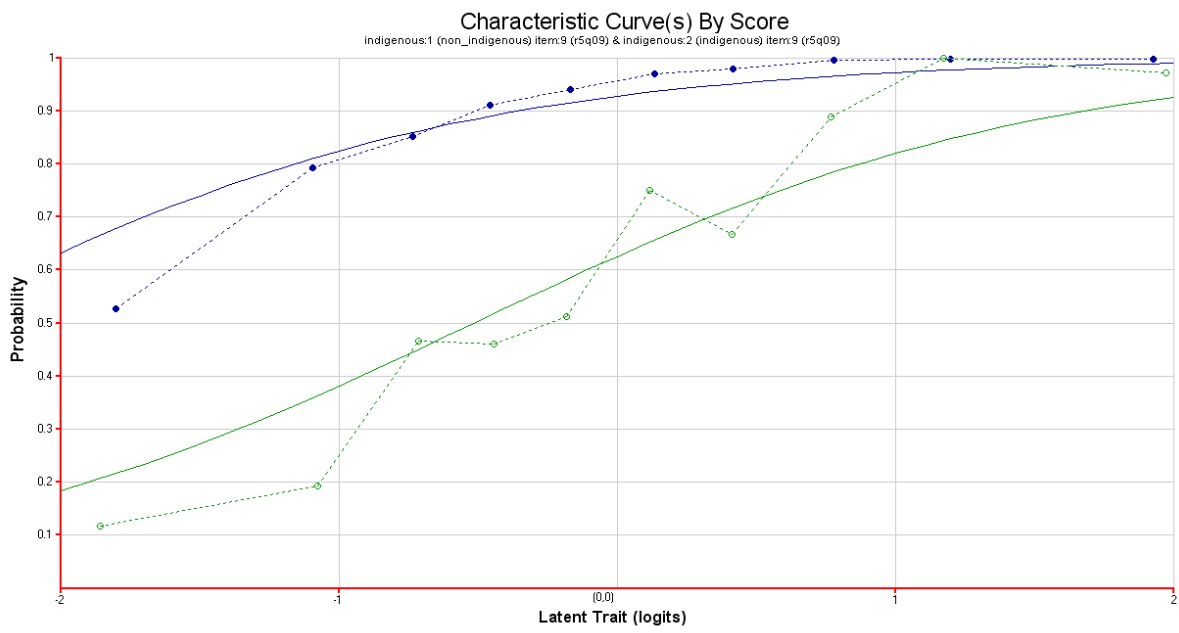
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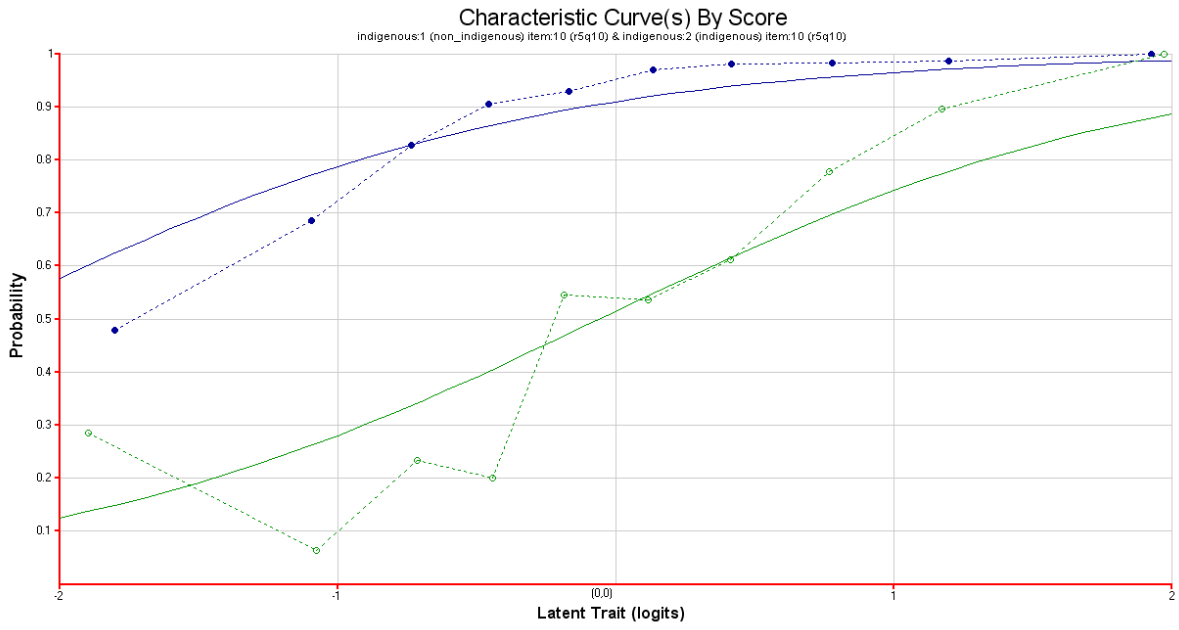
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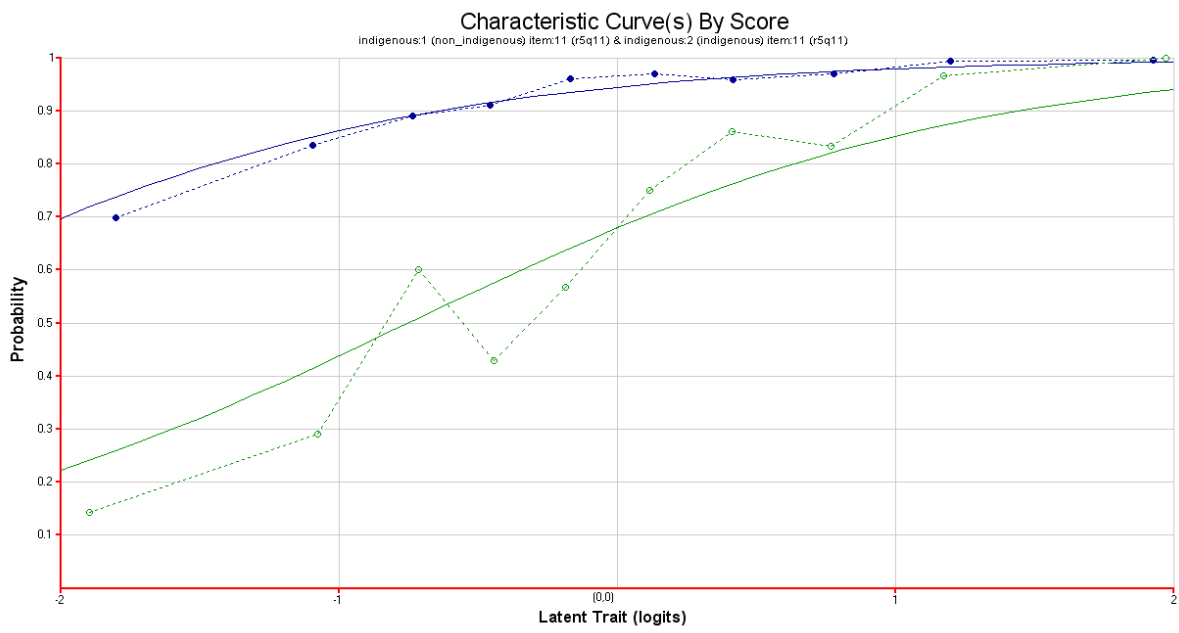
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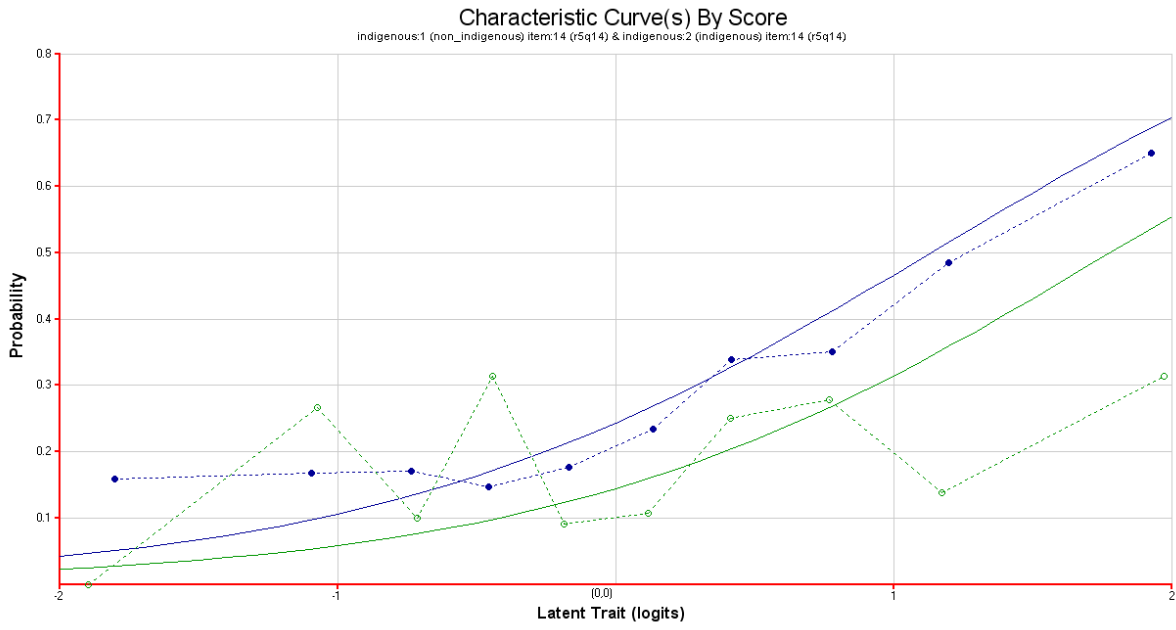
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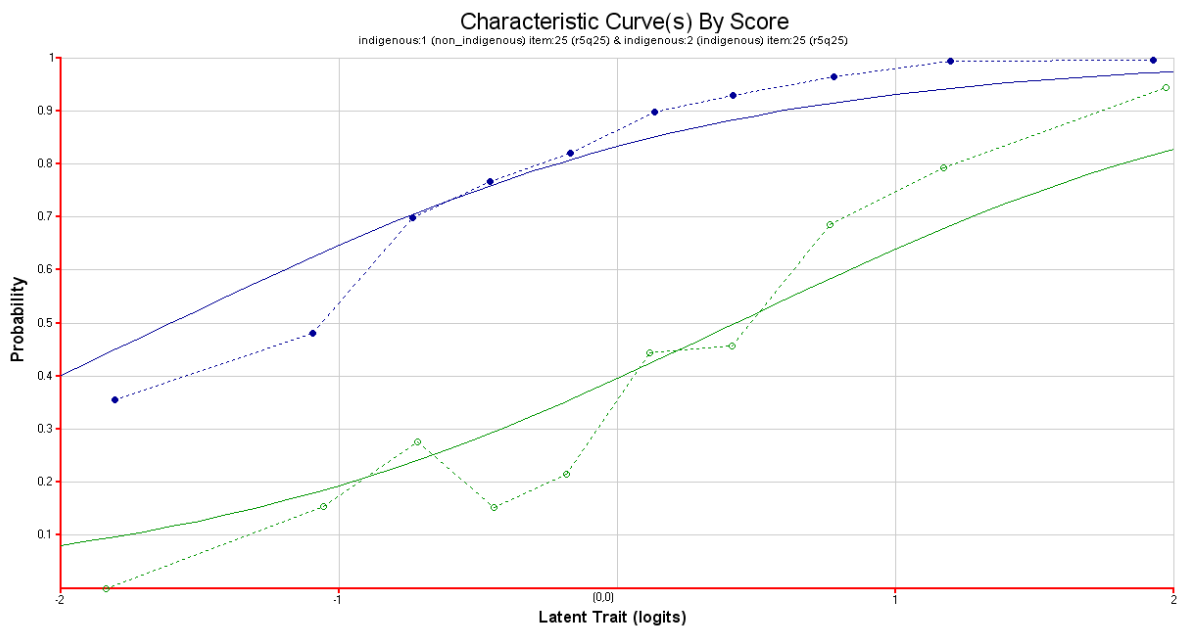
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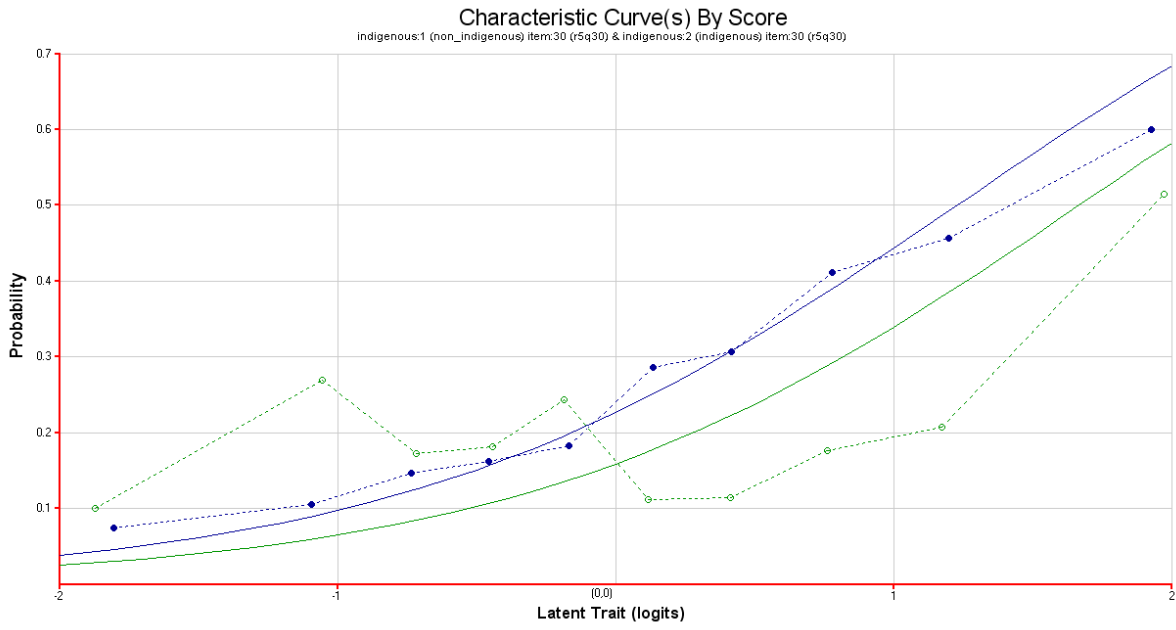
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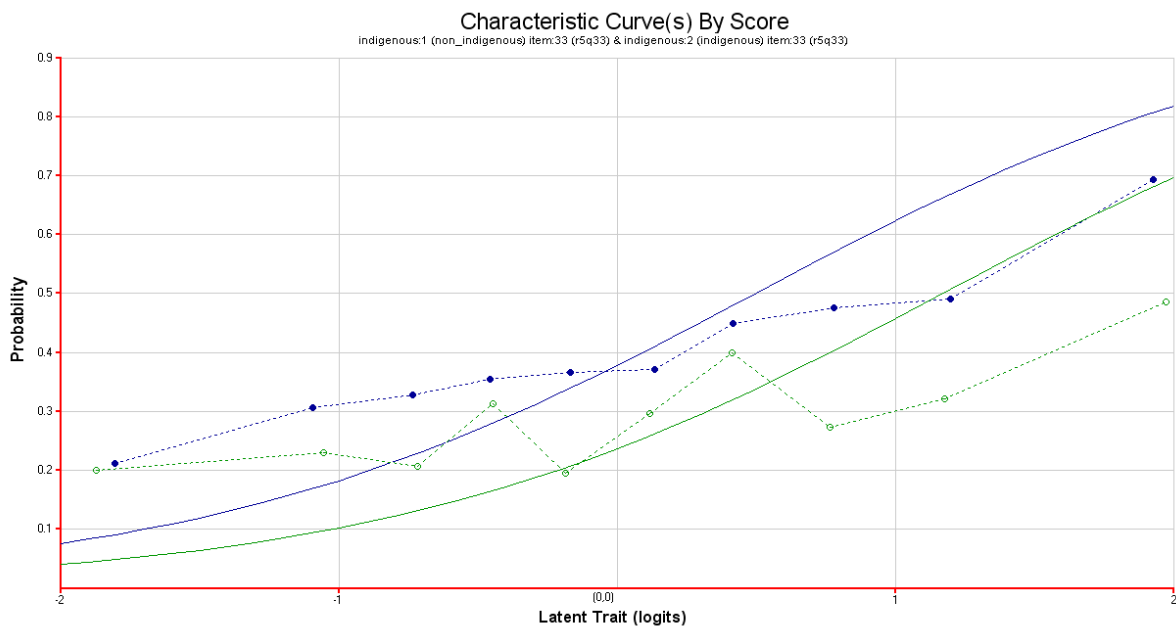
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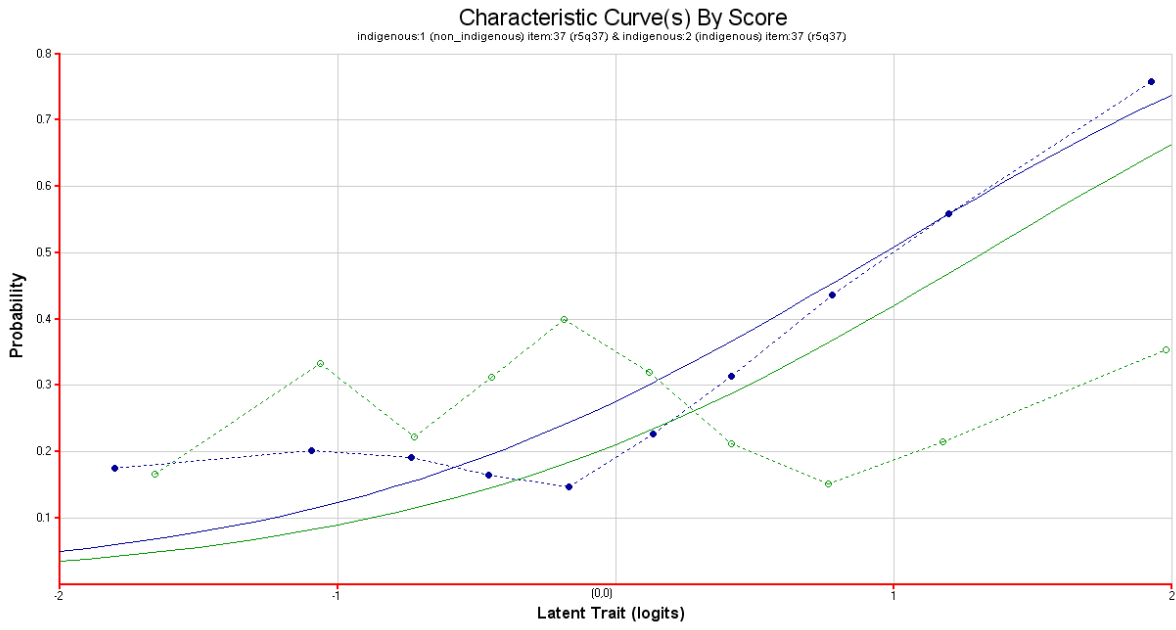
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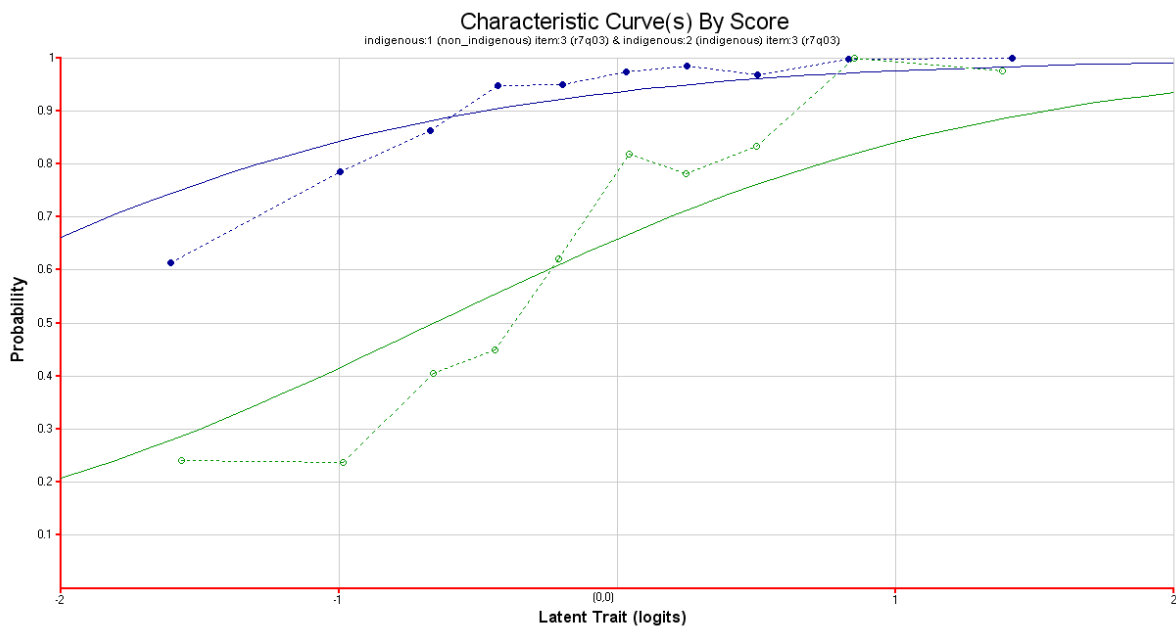
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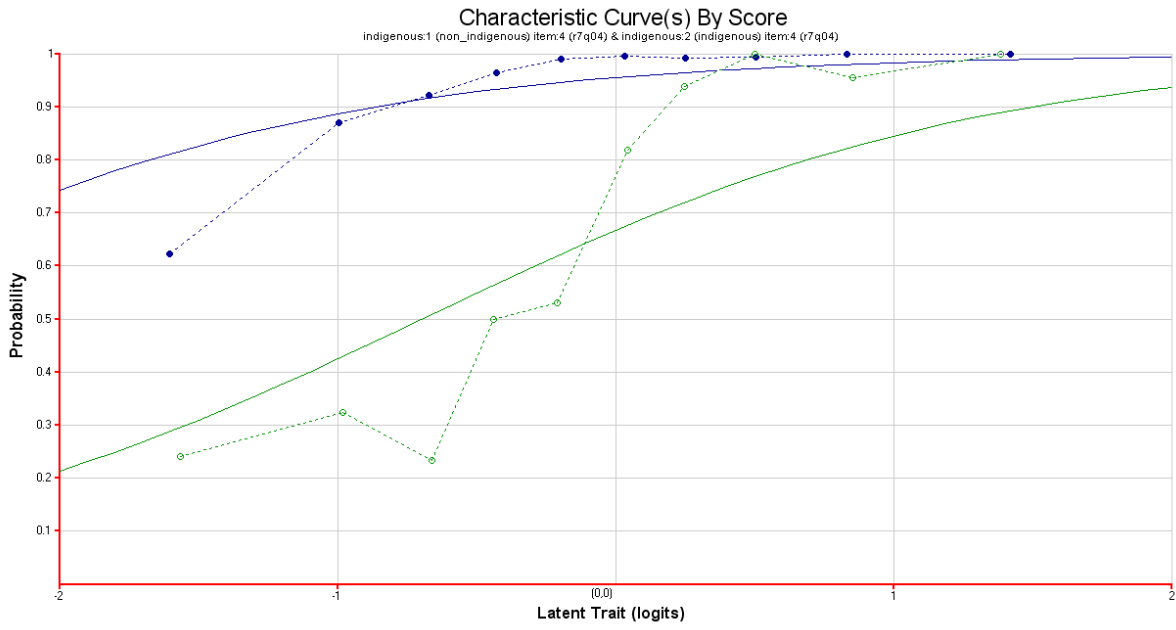
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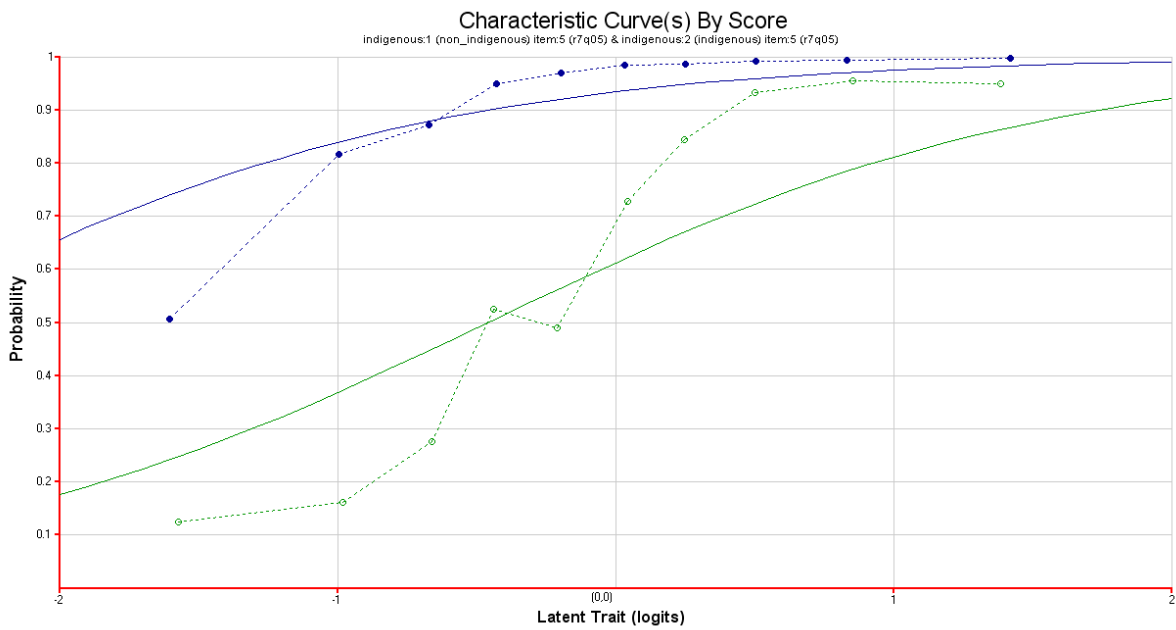
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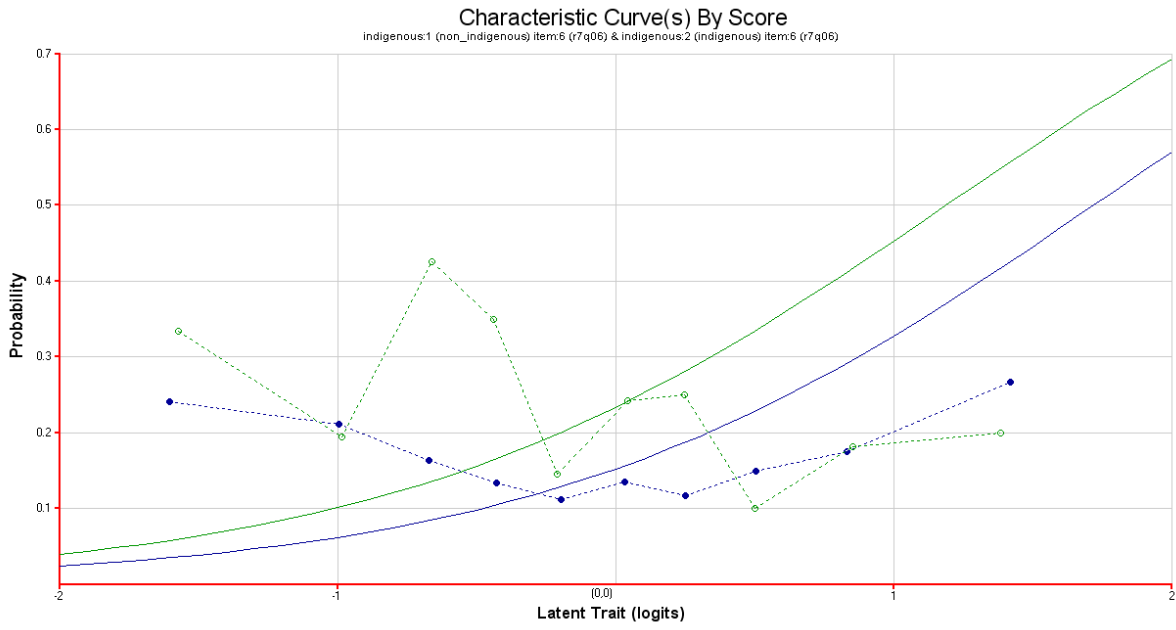
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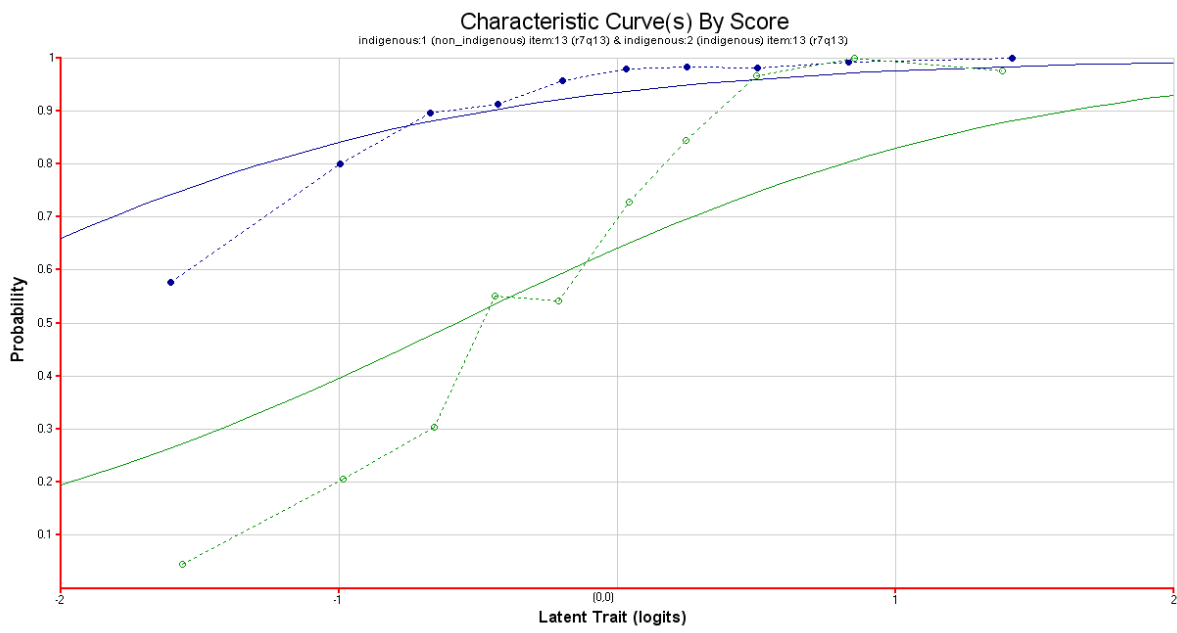
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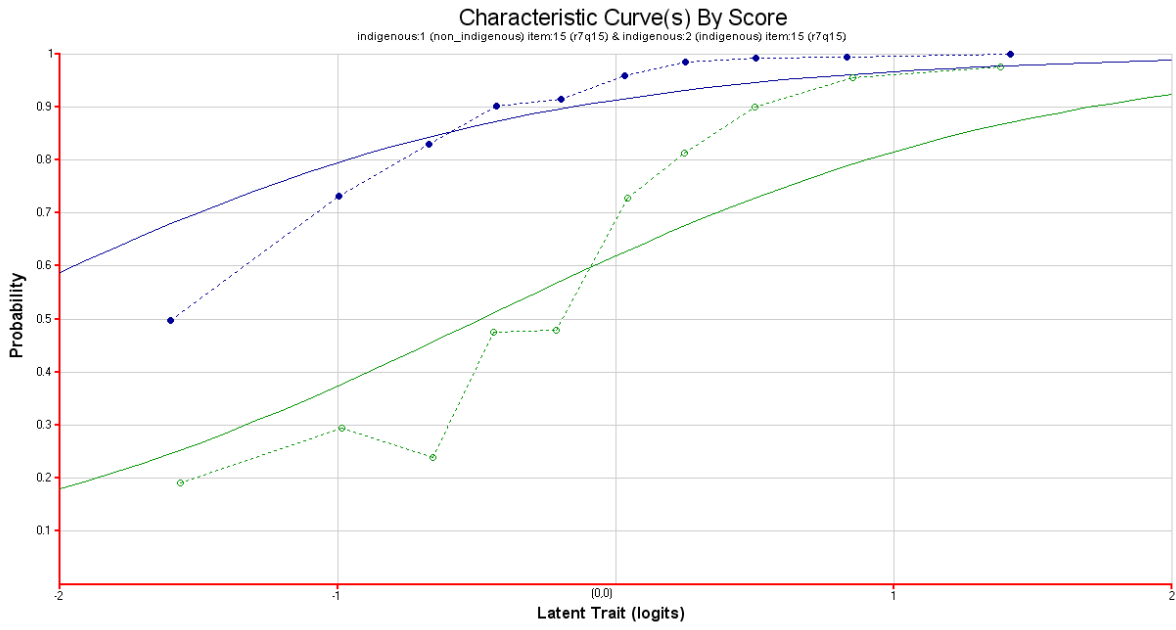
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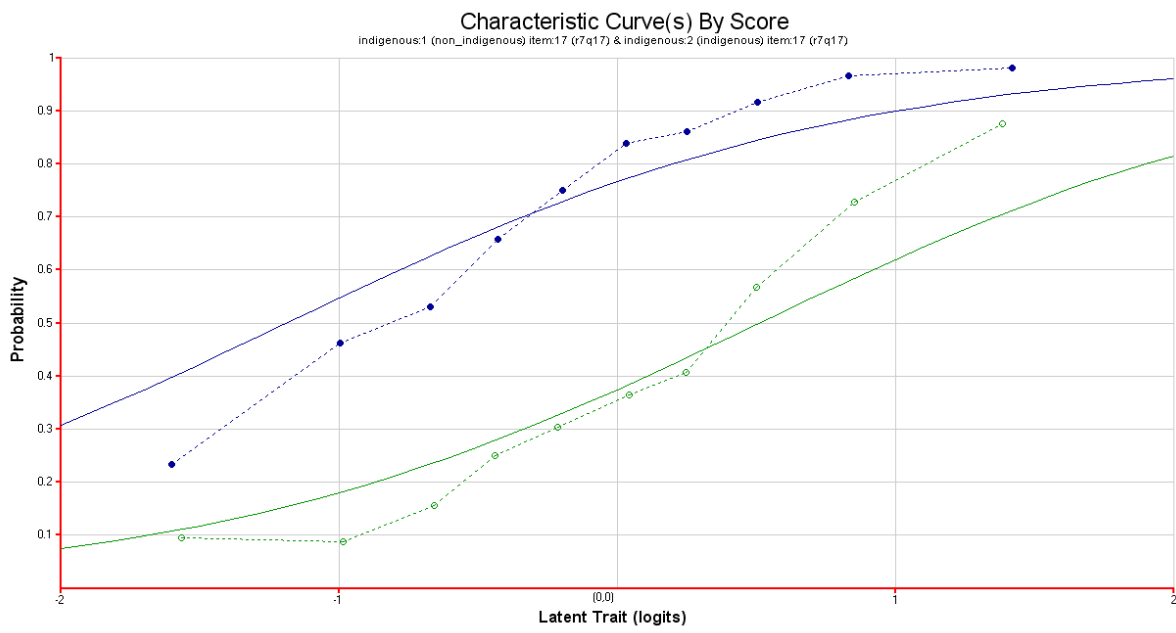
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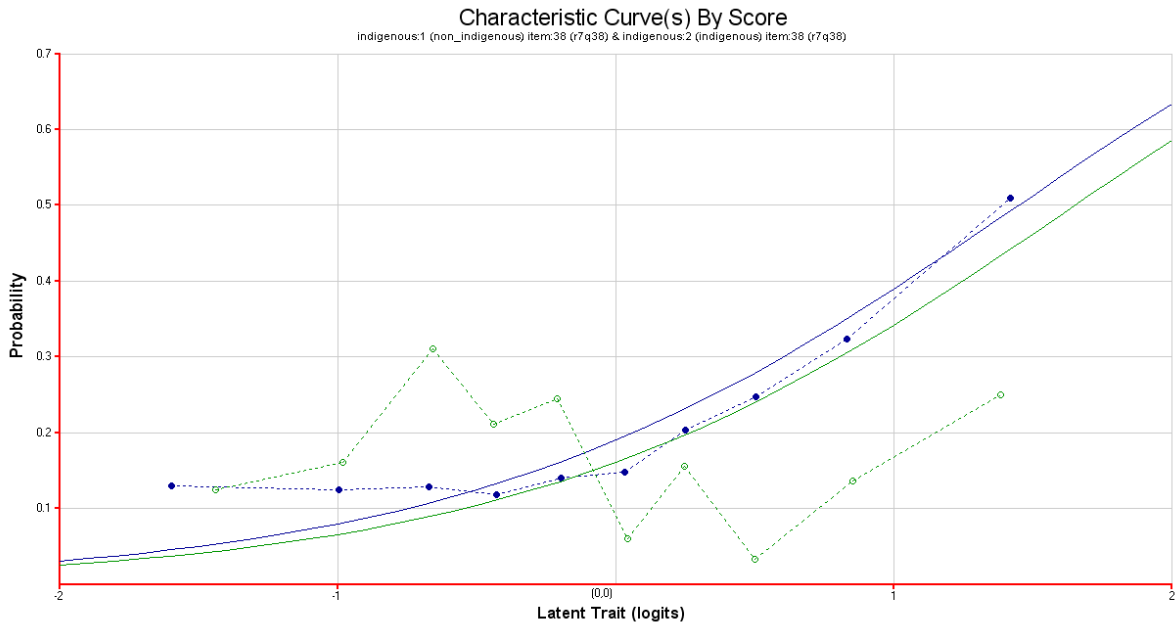
Item r7q13



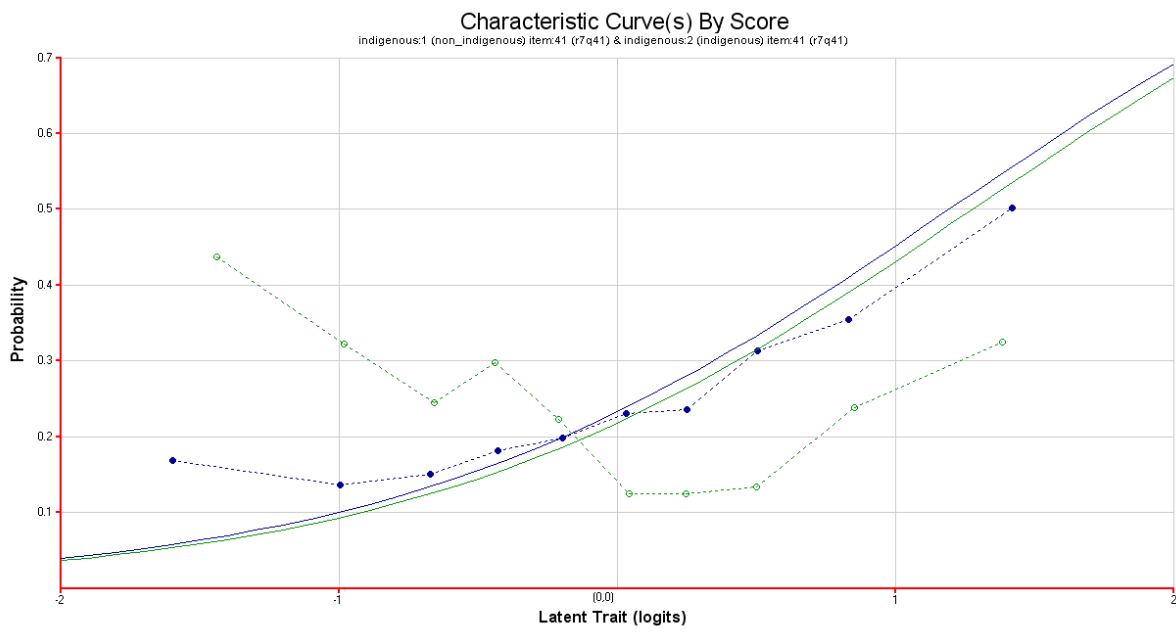
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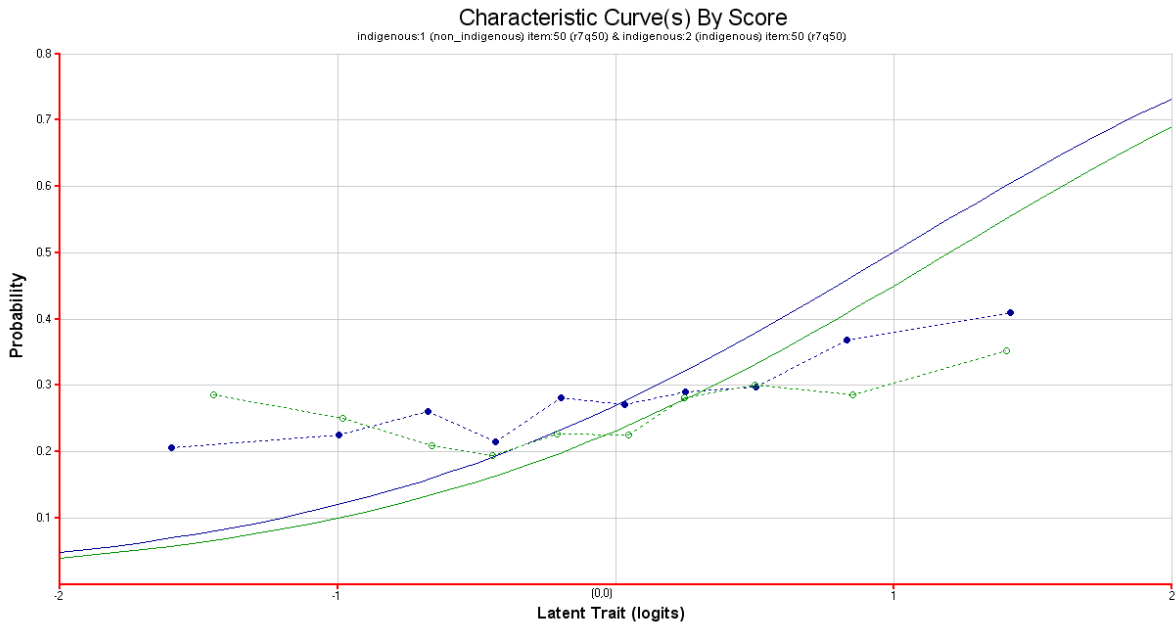
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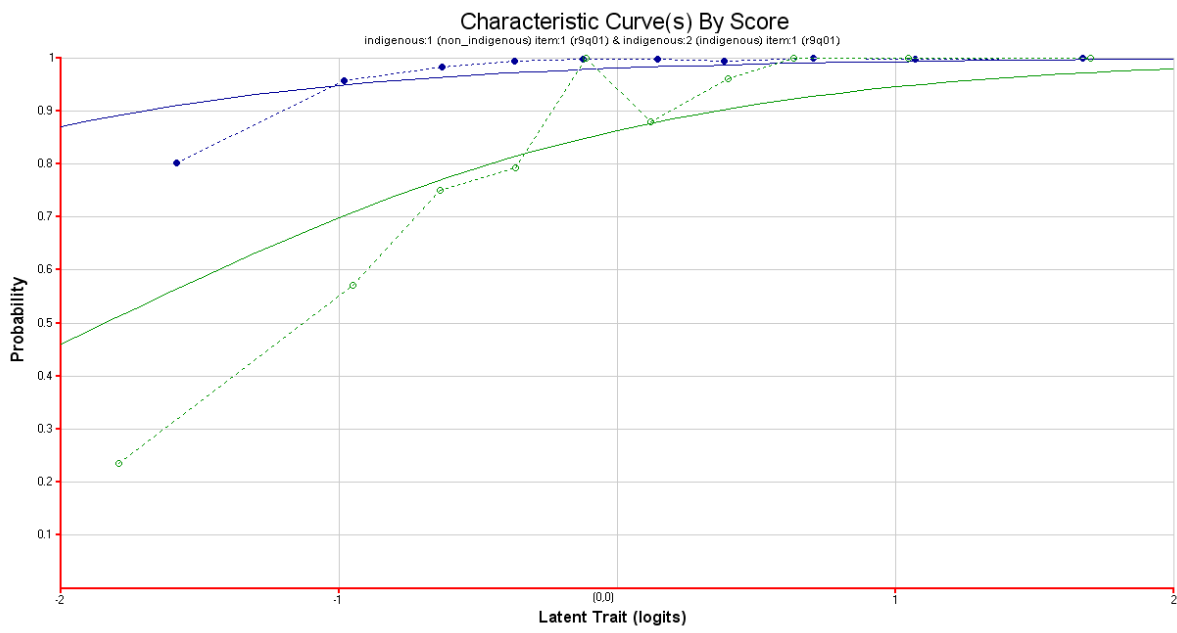
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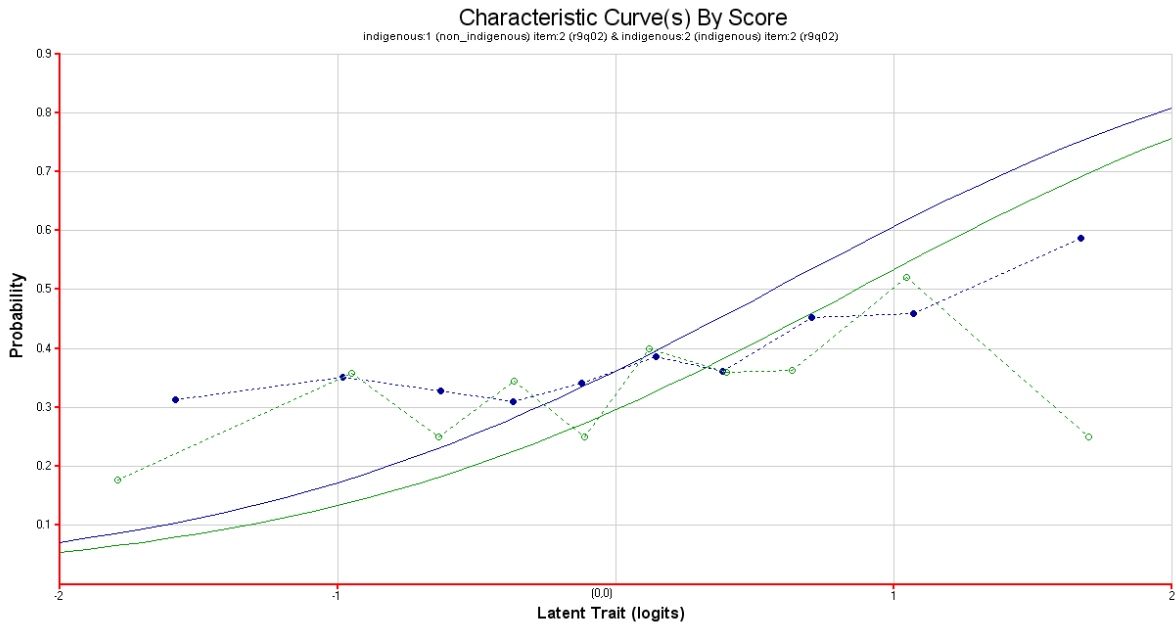
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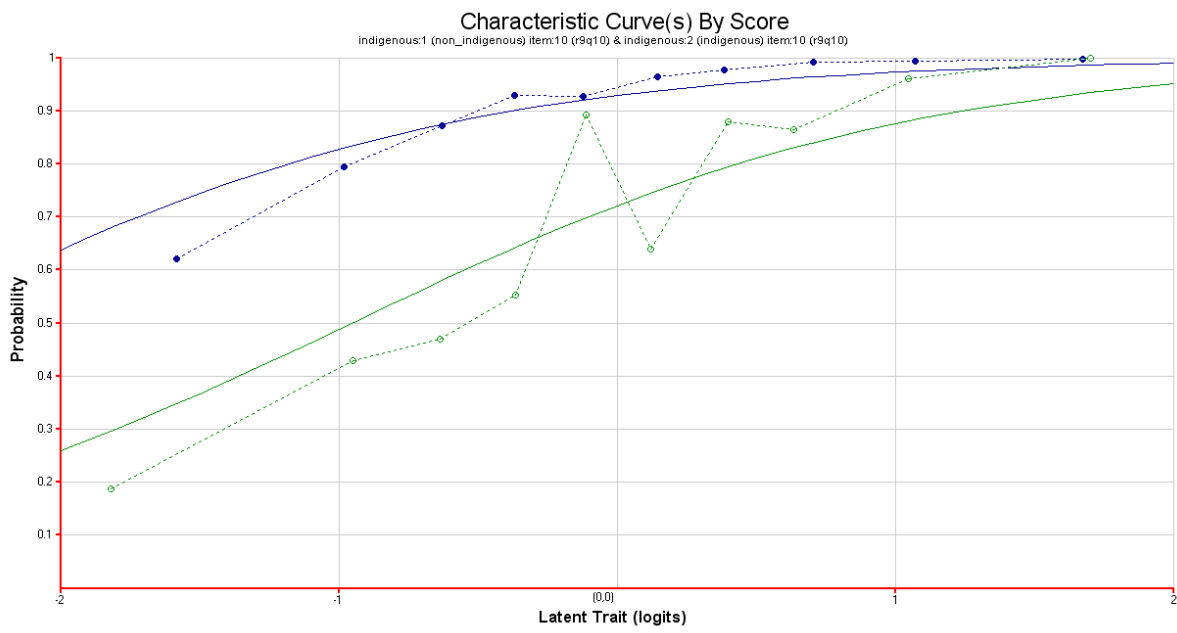
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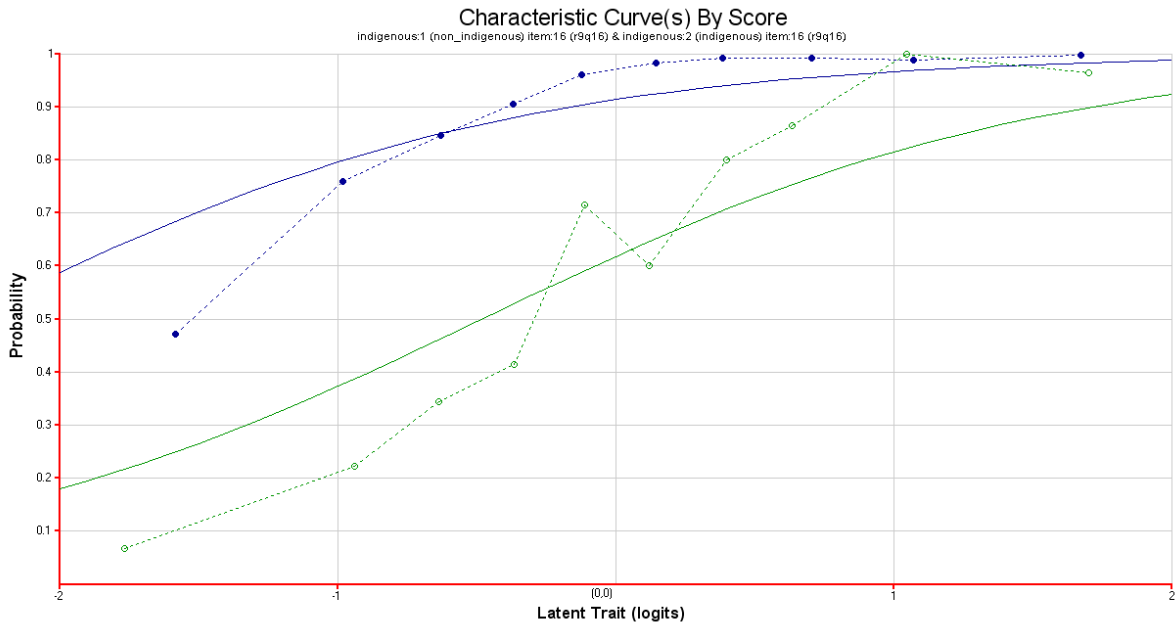
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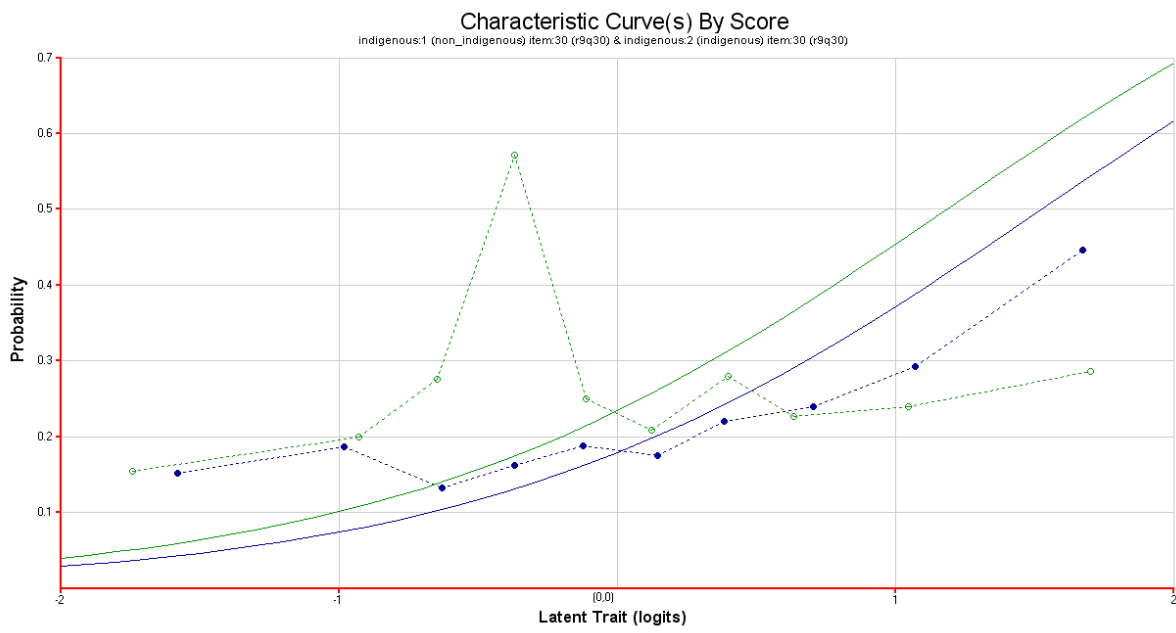
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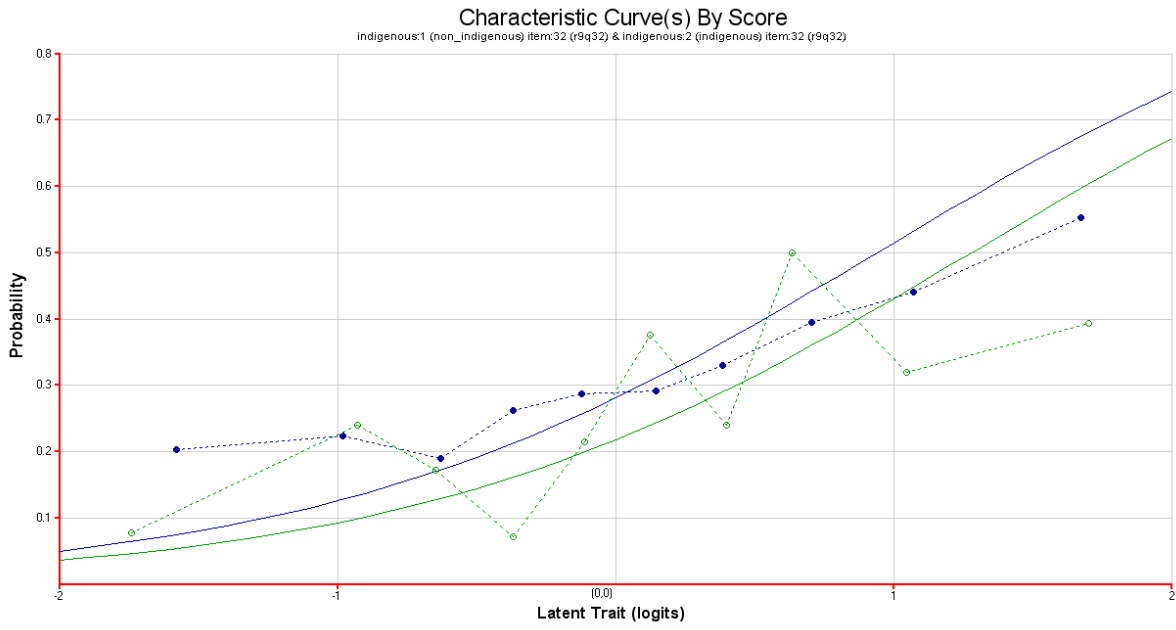
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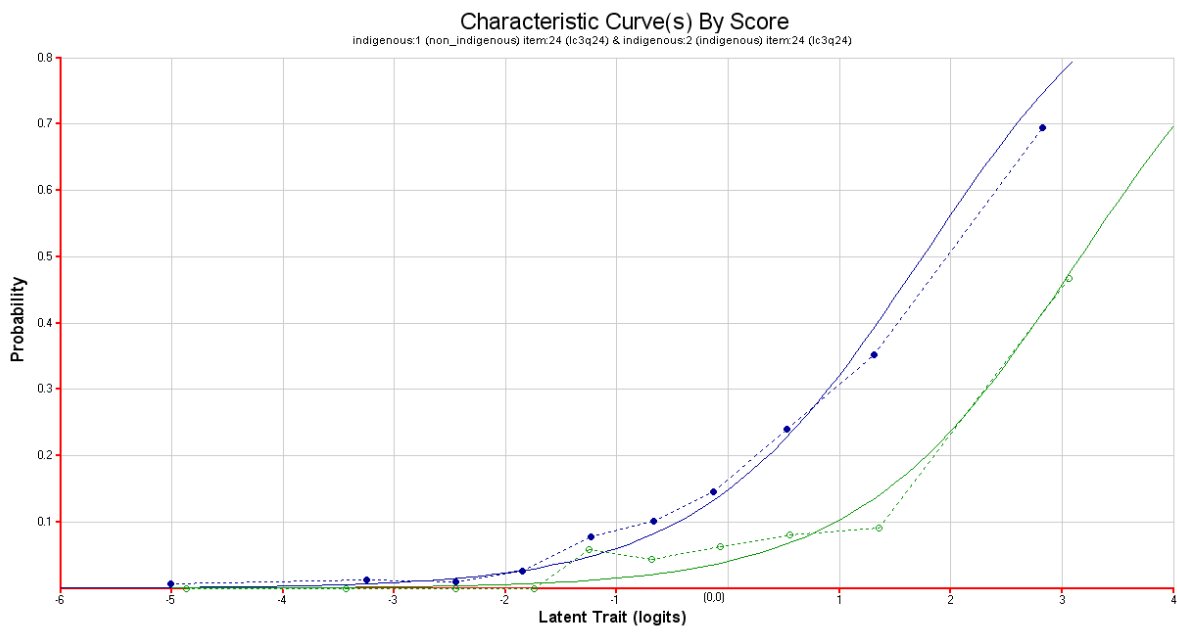
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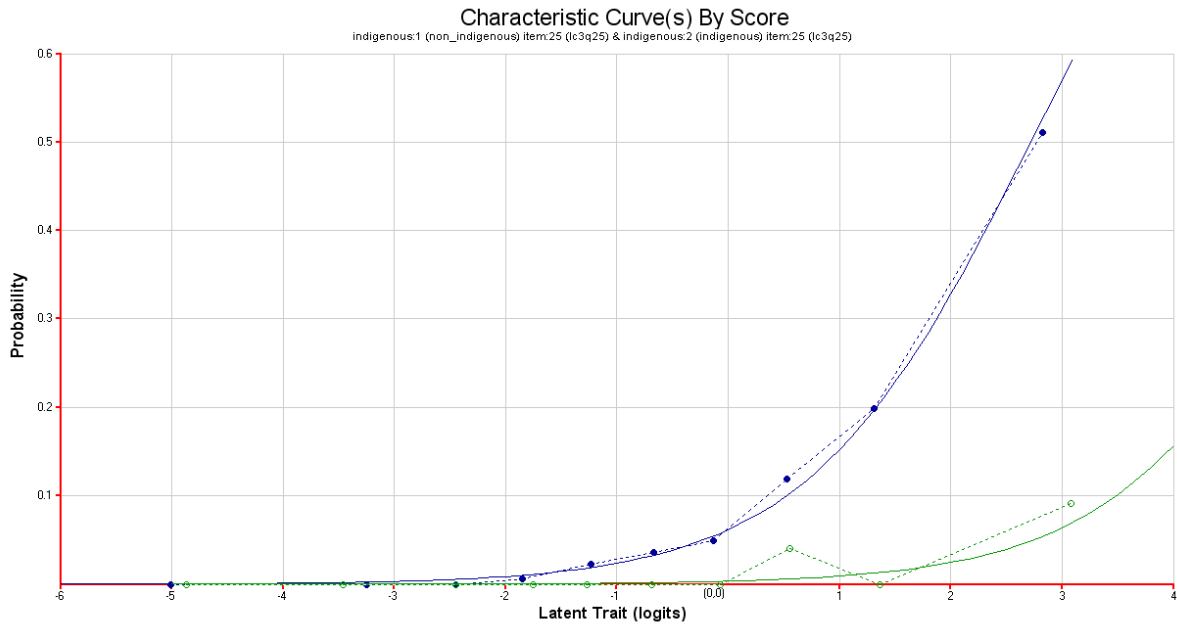
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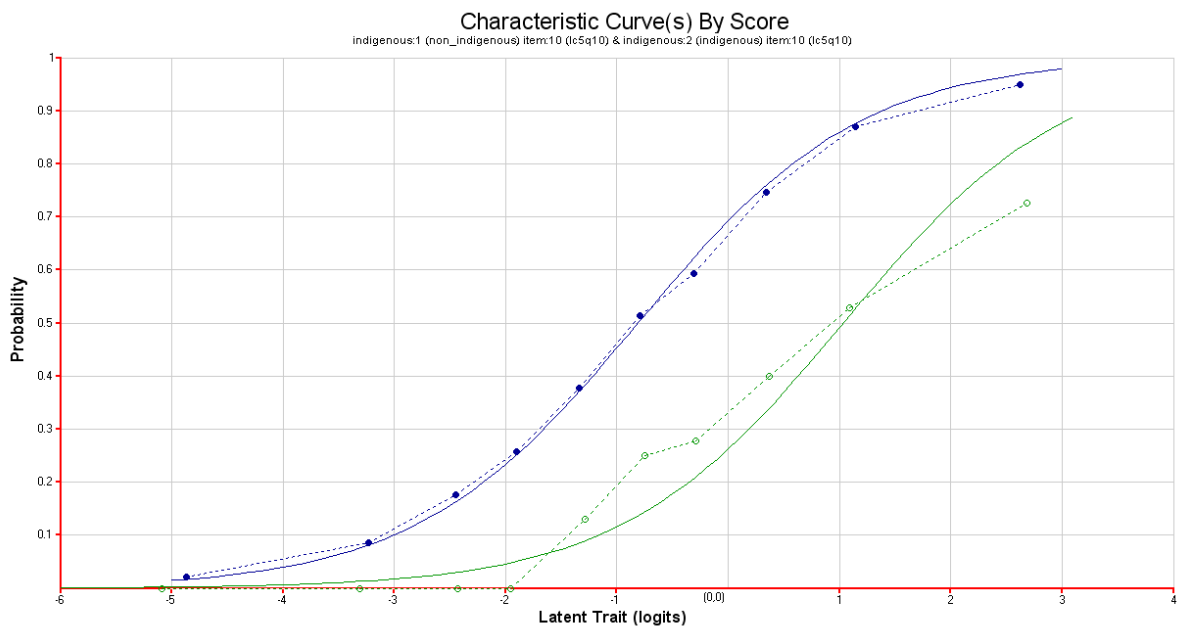
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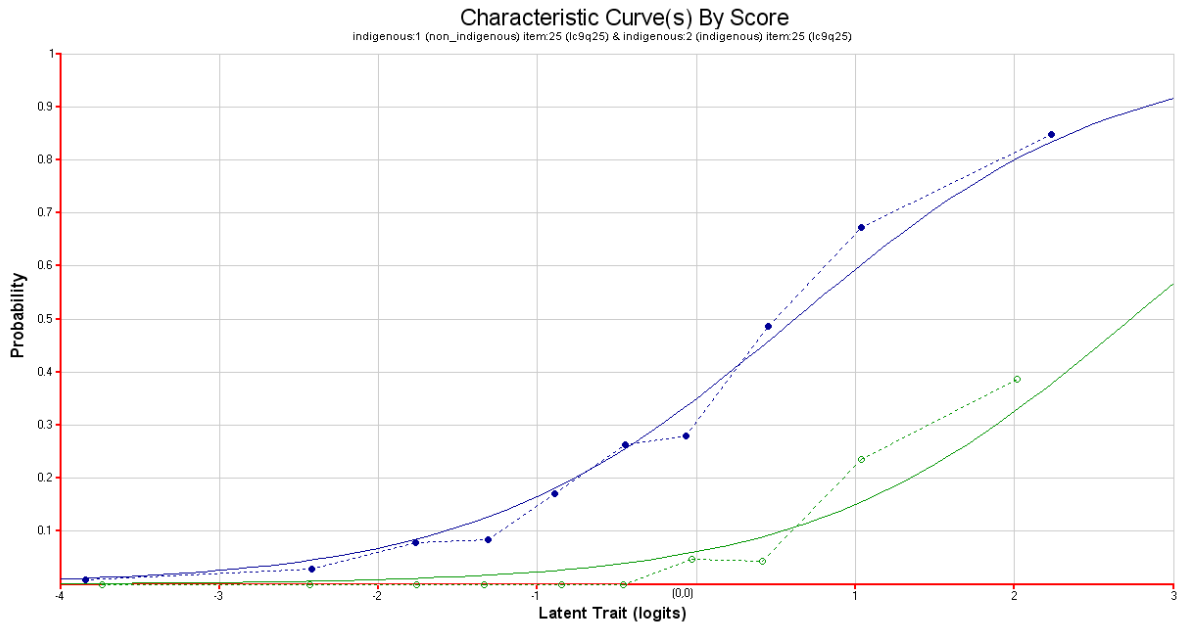
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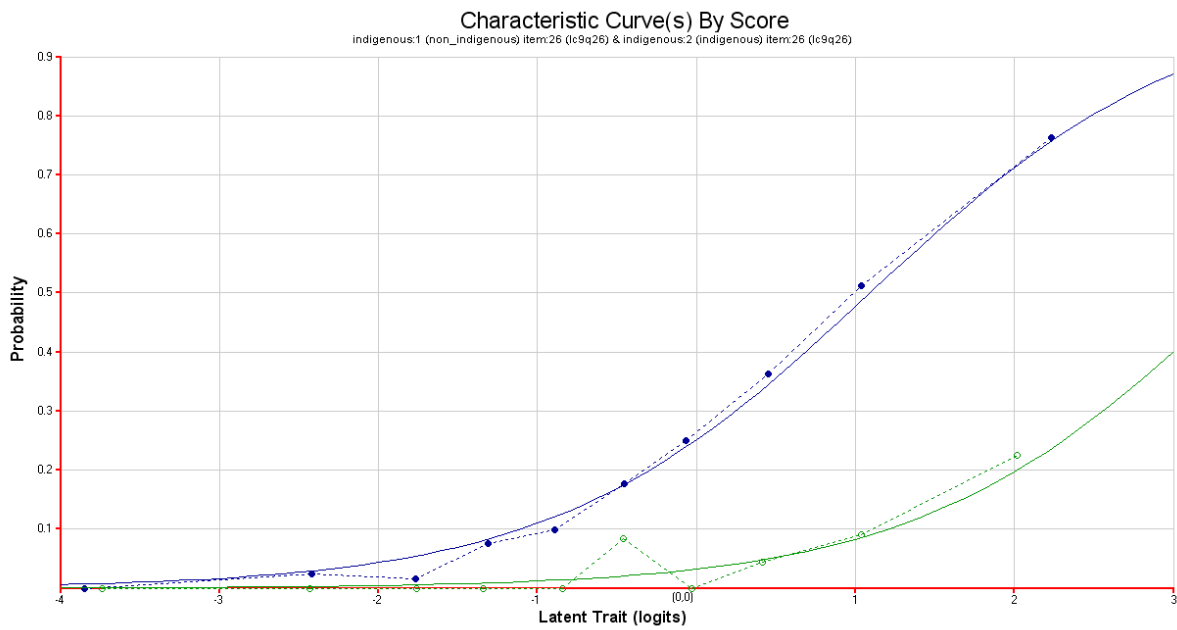
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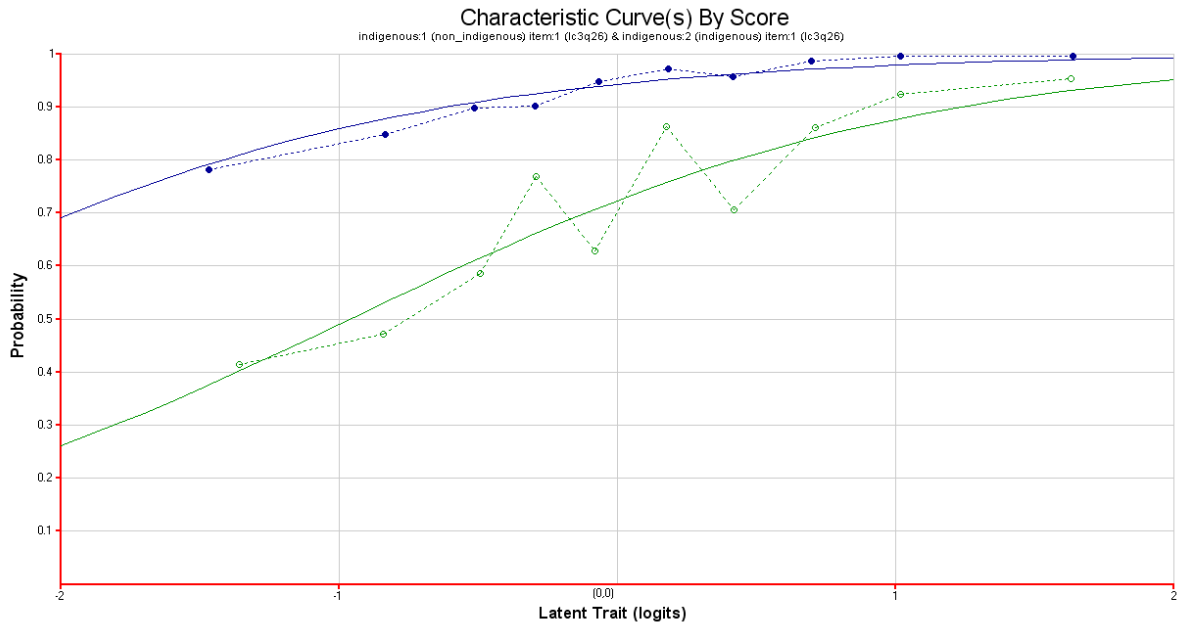
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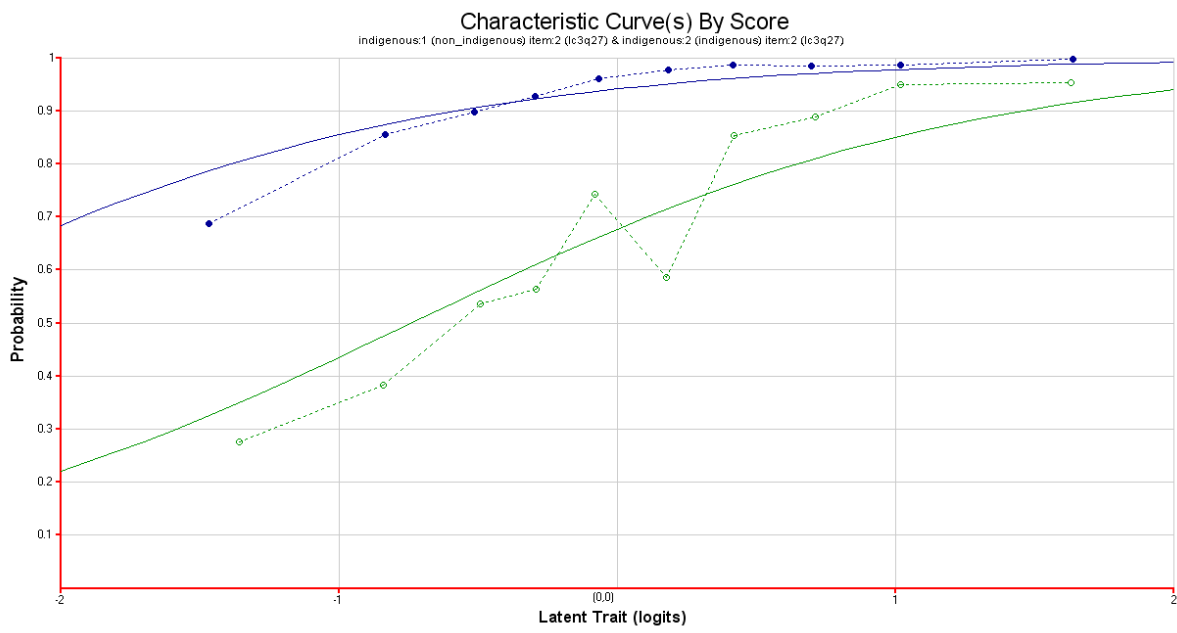
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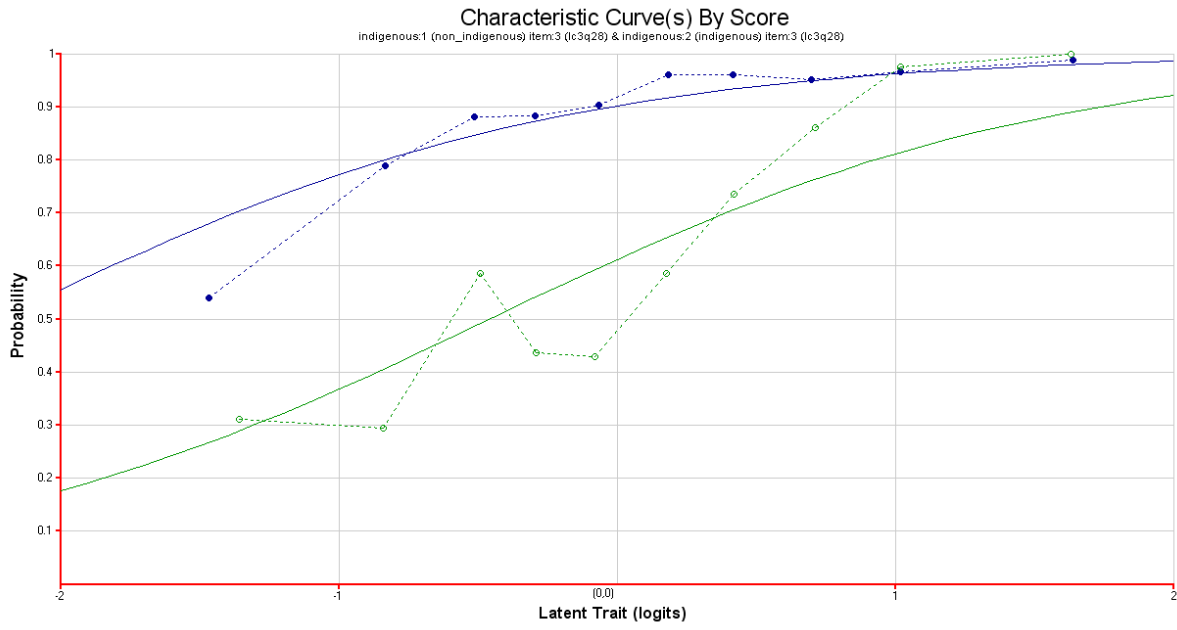
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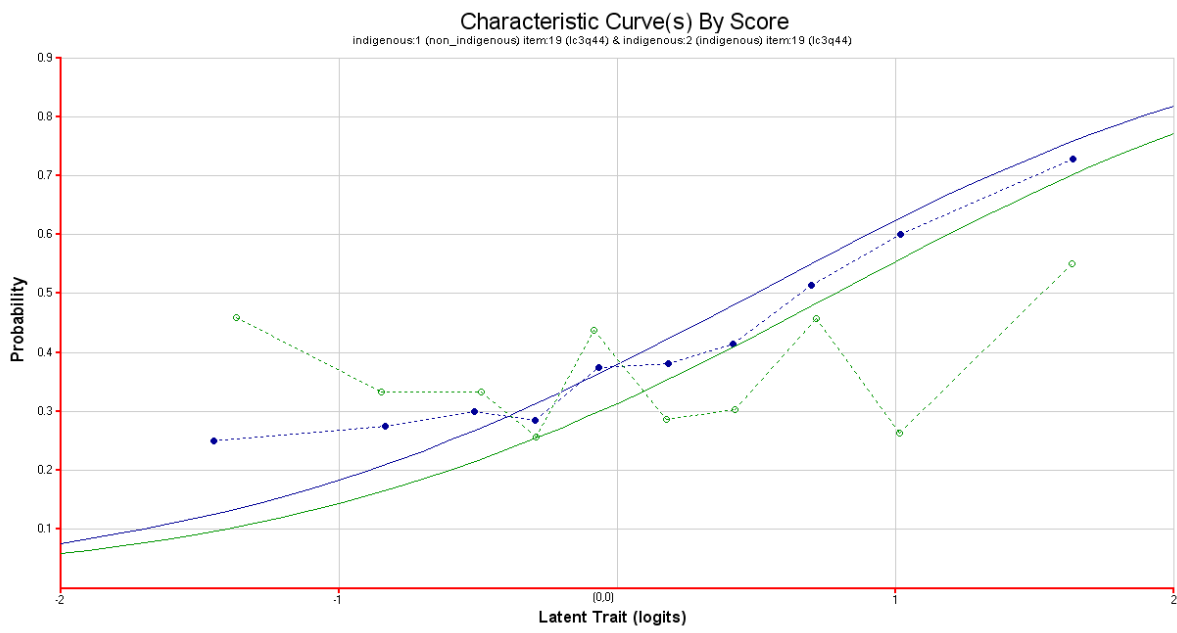
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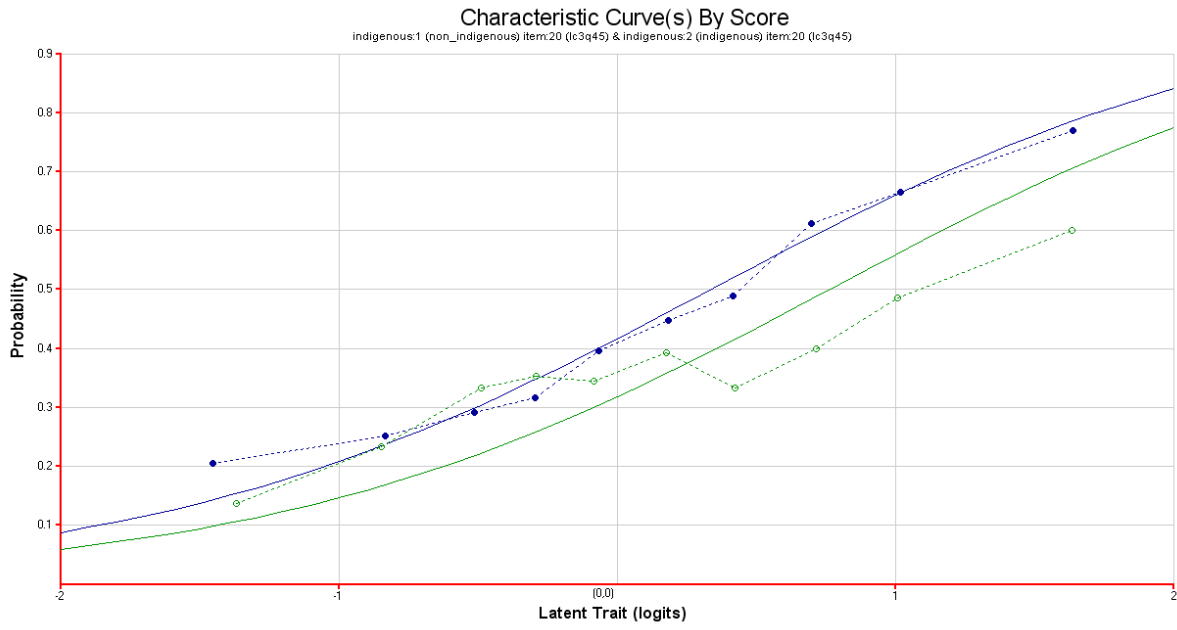
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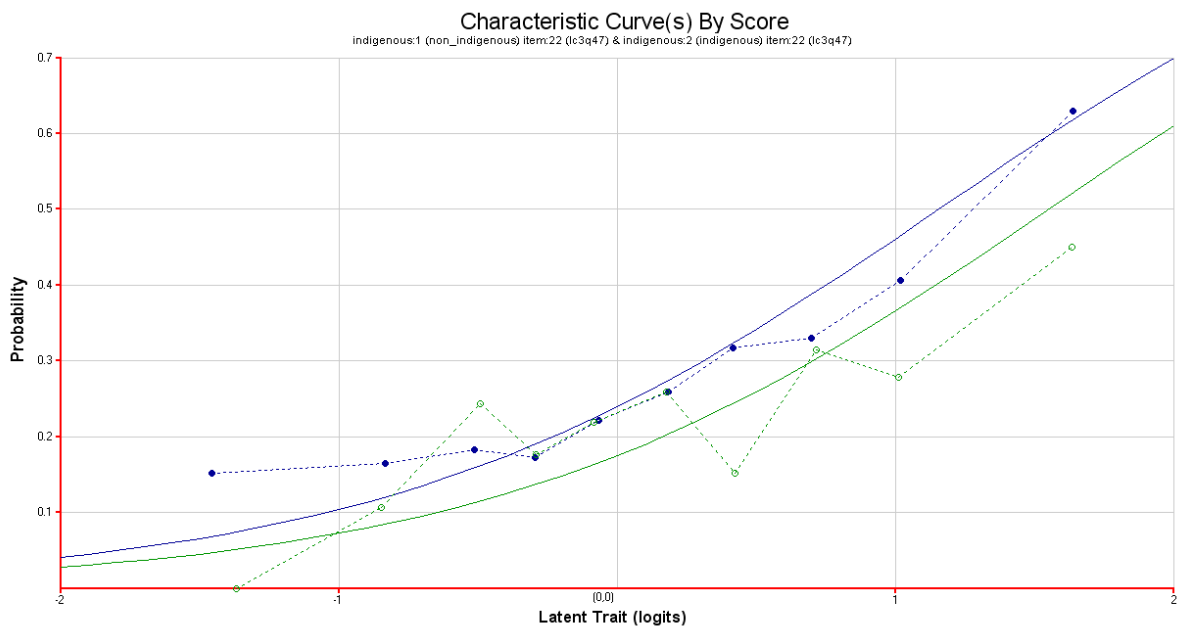
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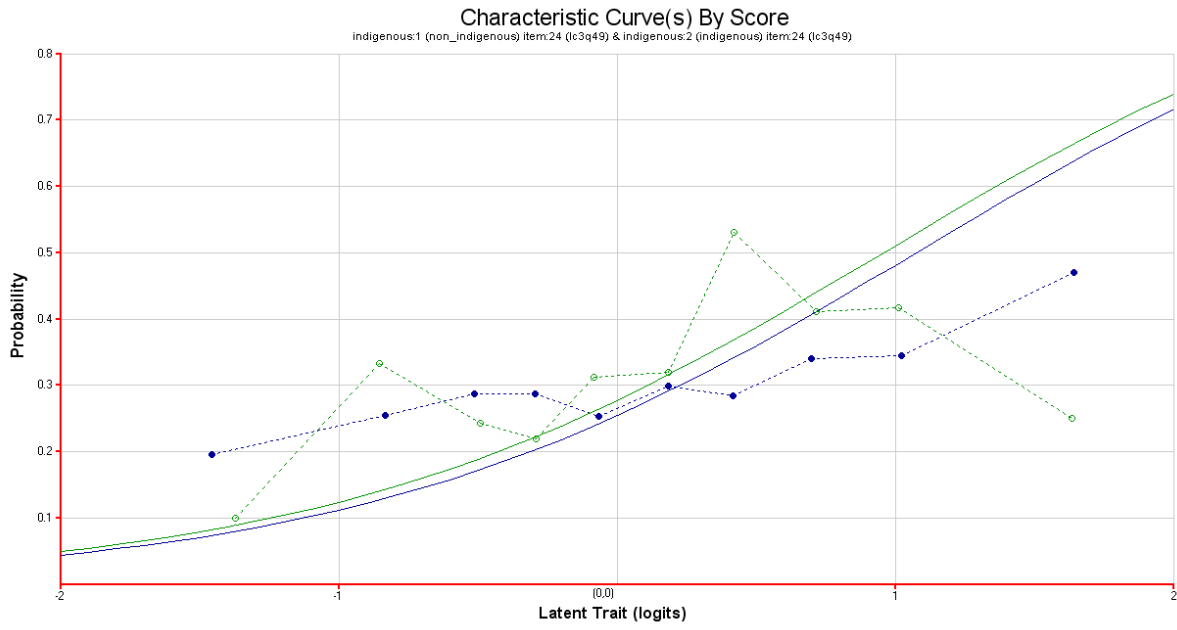
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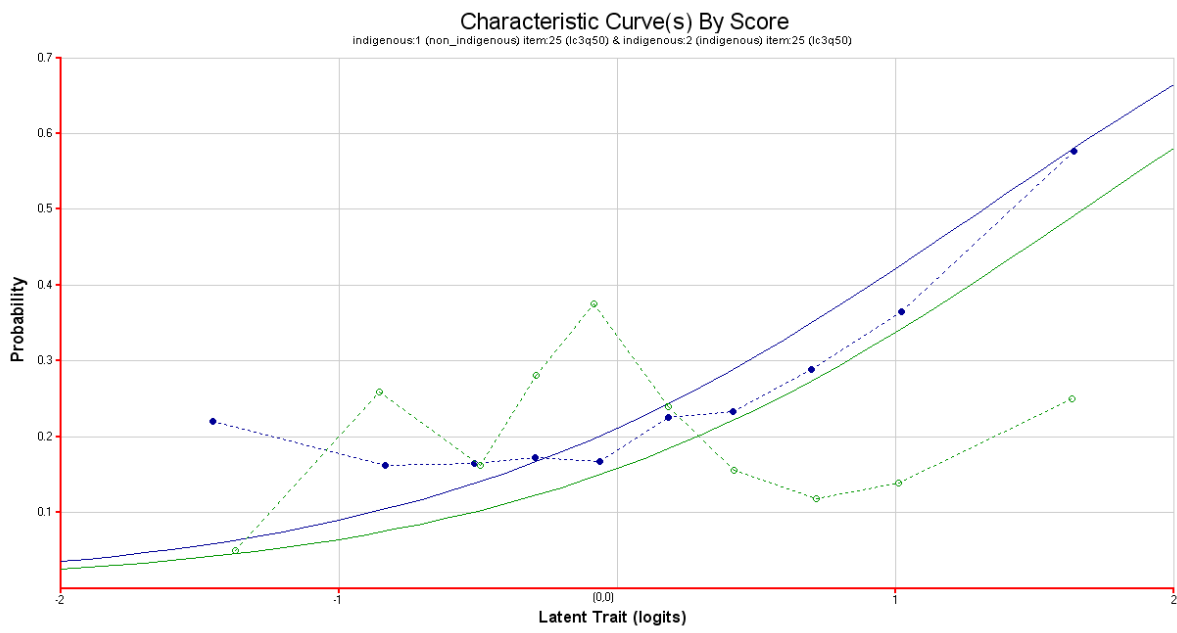
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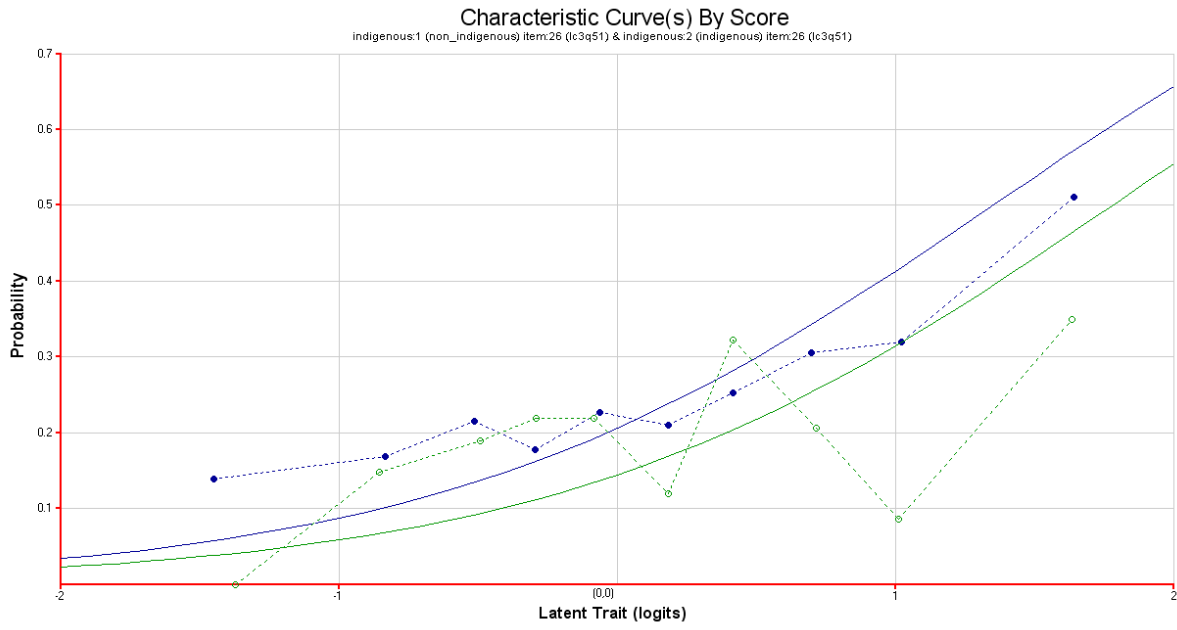
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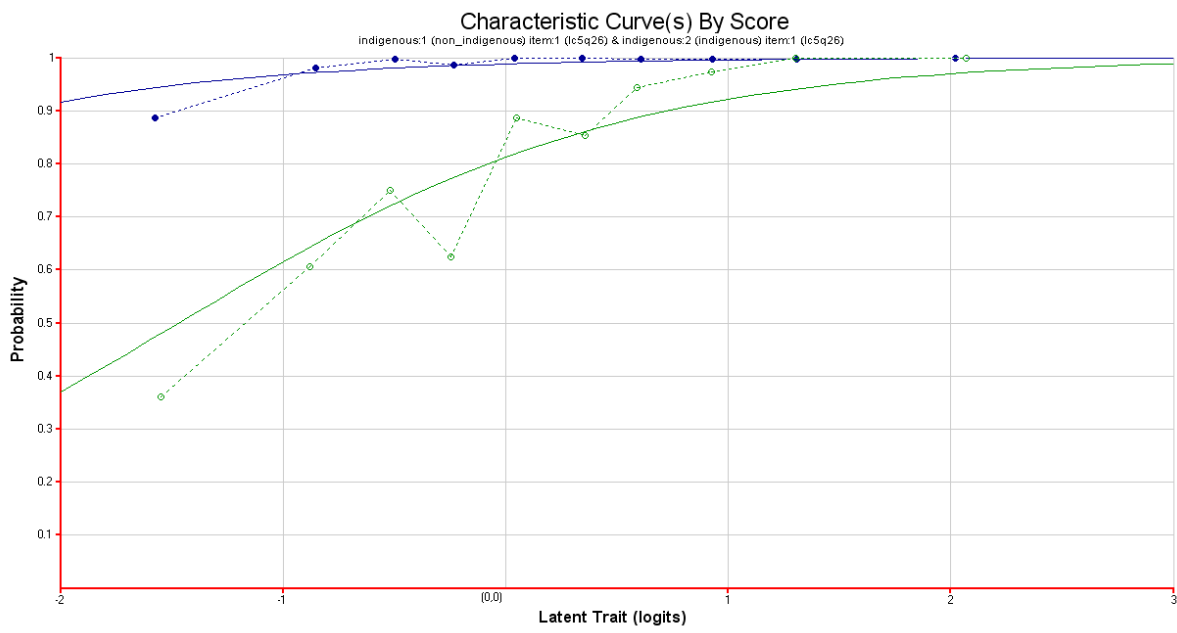
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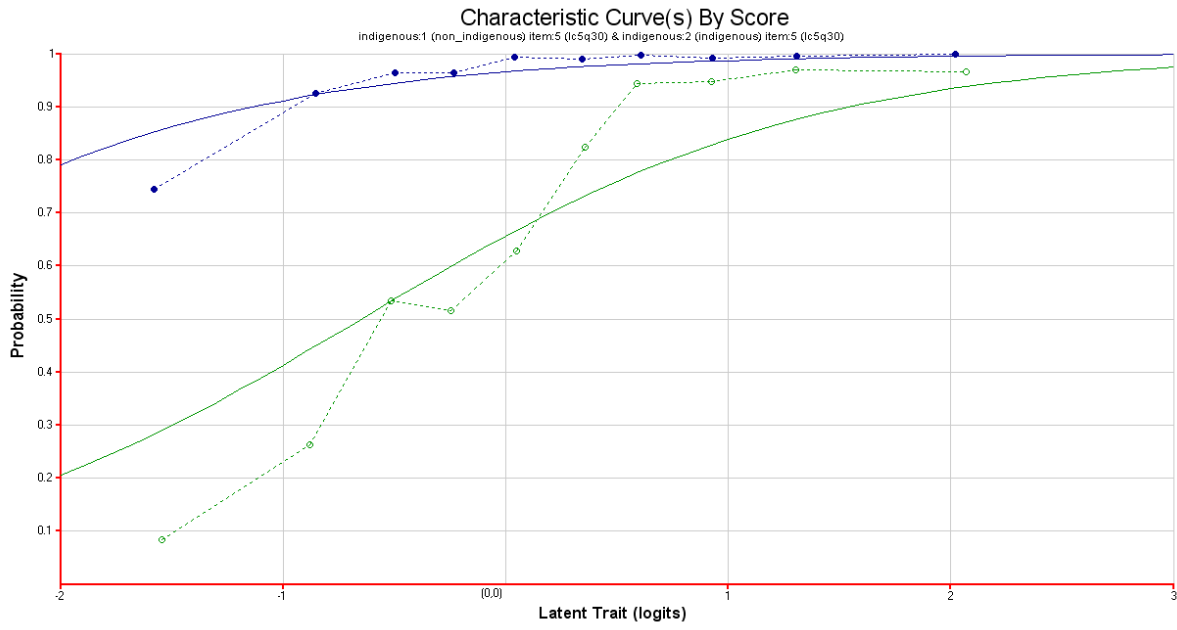
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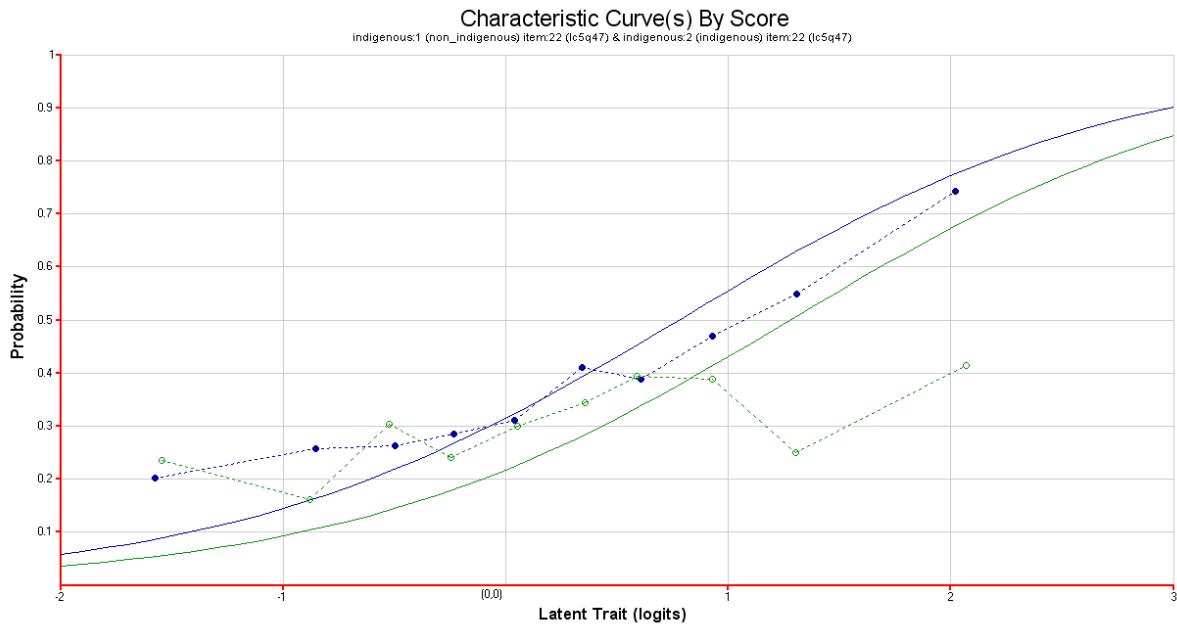
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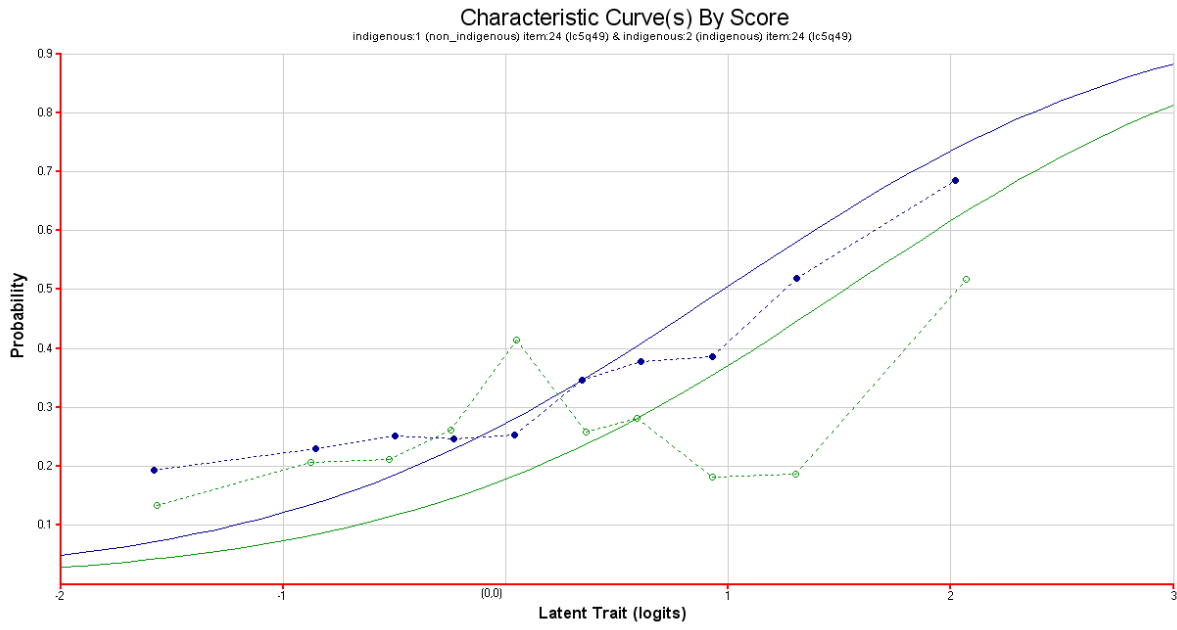
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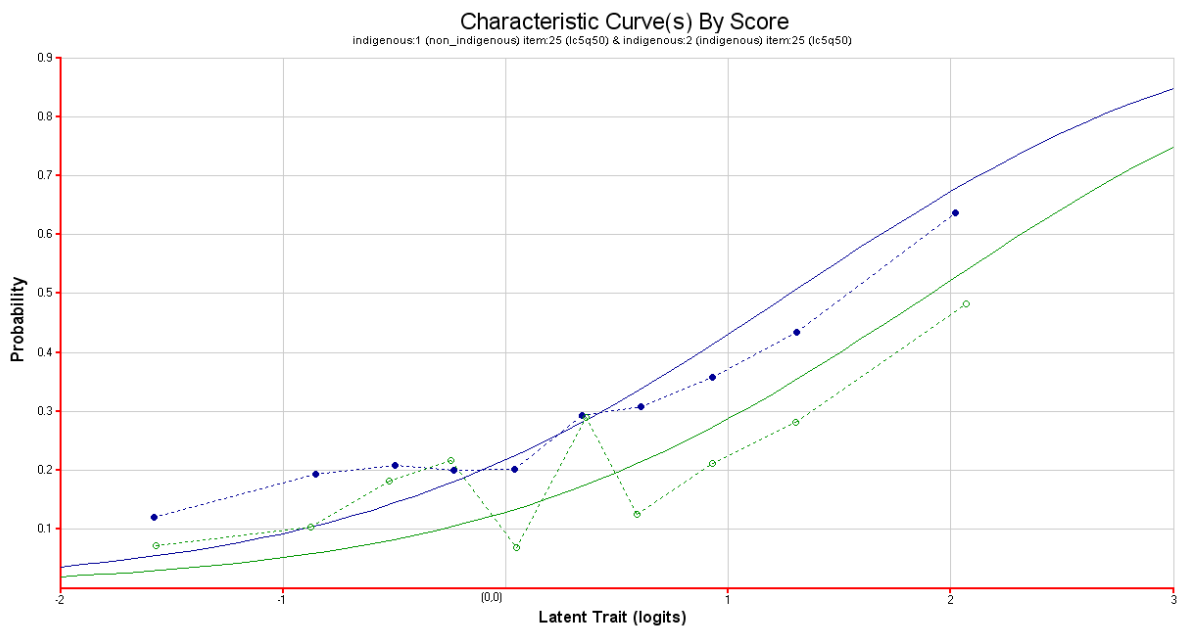
Item lc5q30



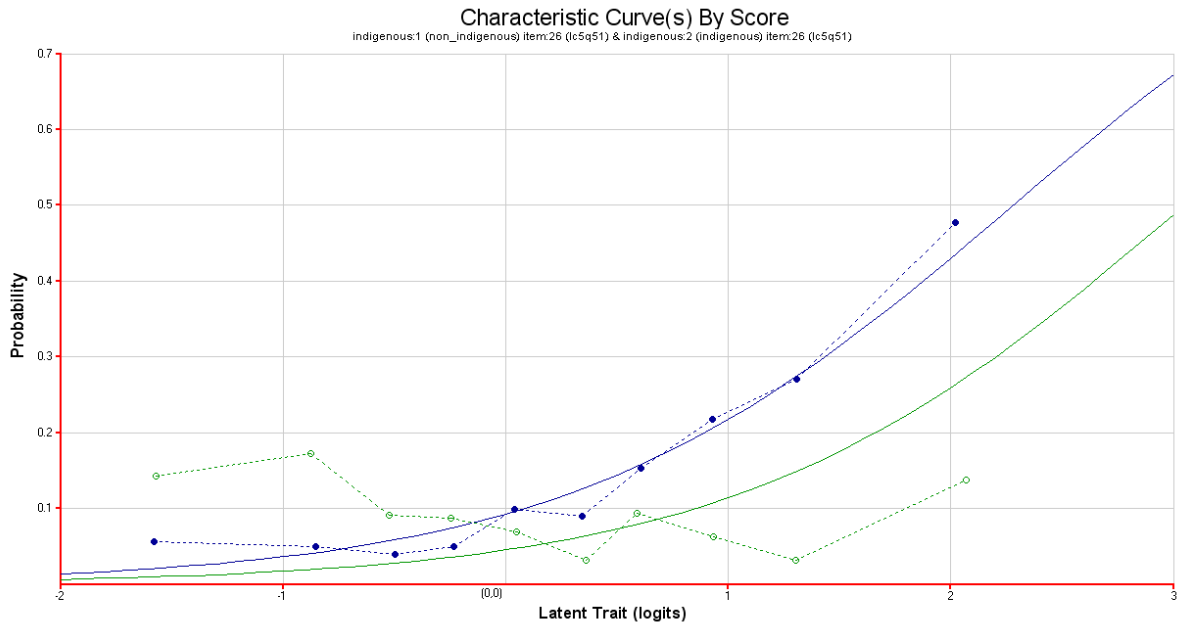
Item lc5q47



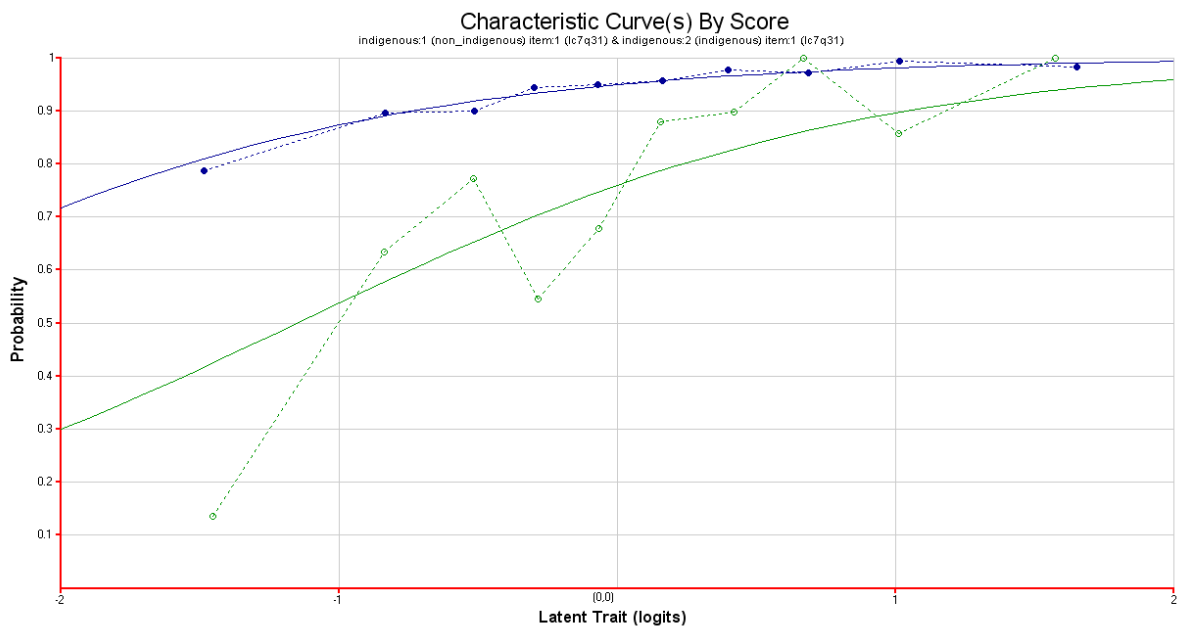
Item lc5q49



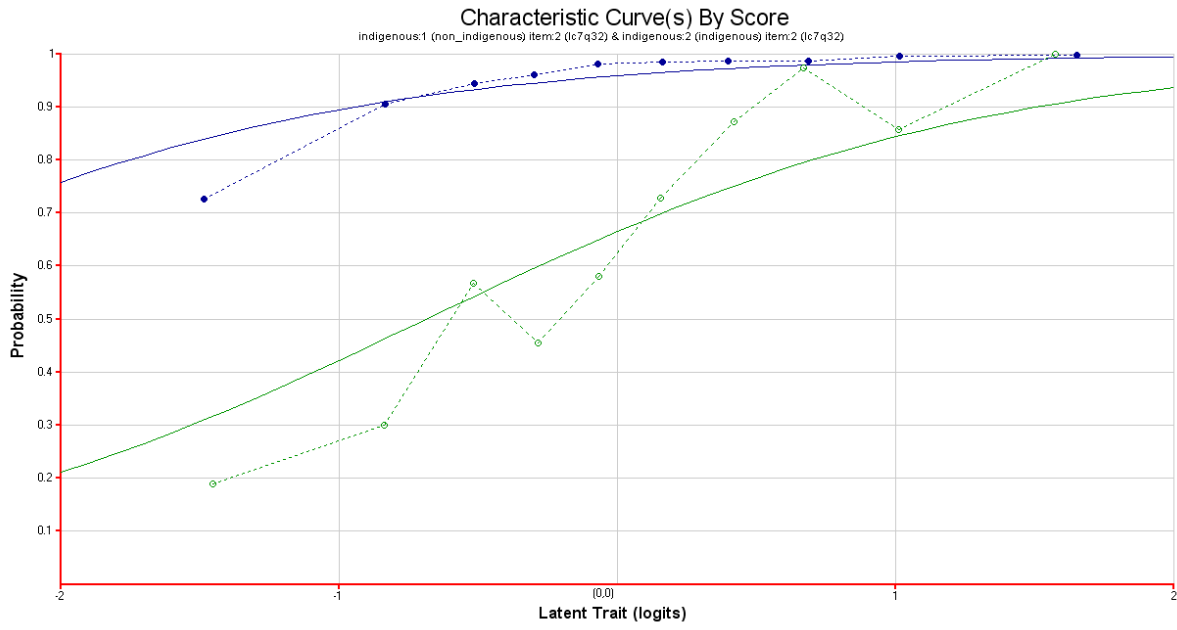
Item lc5q50



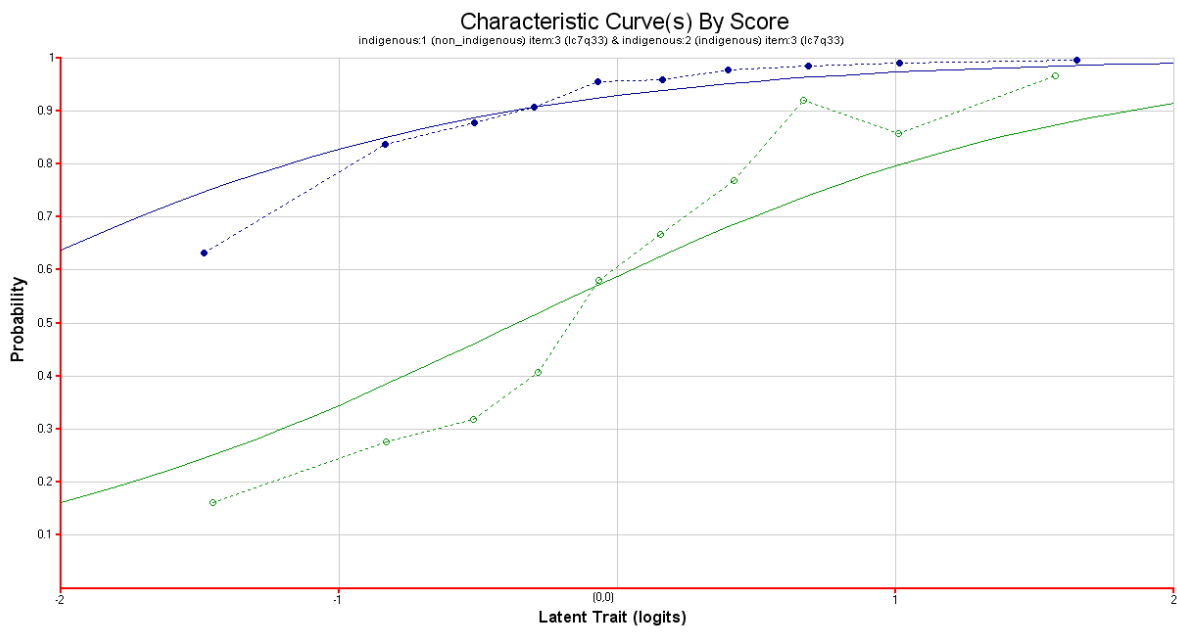
Item lc5q51



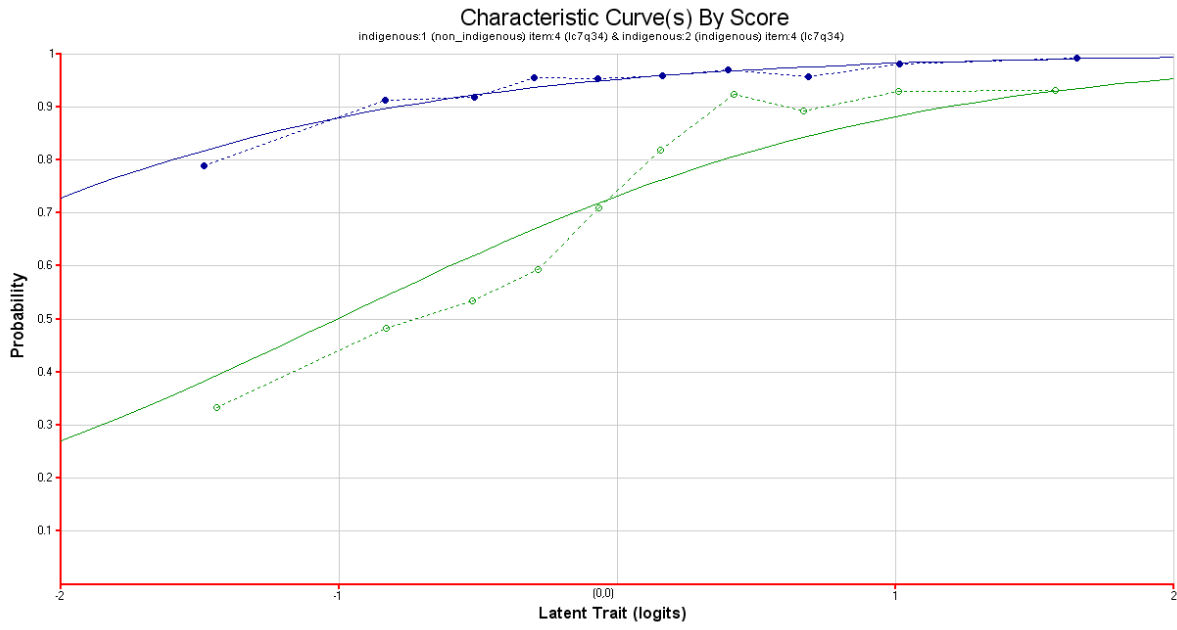
Item lc7q31



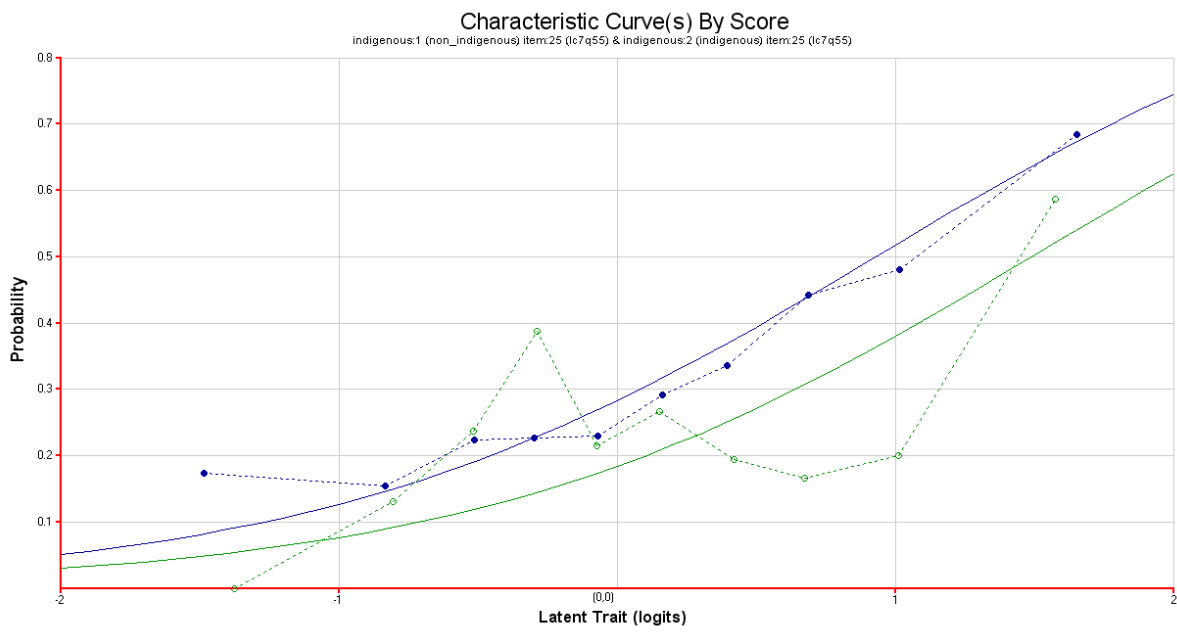
Item lc7q32



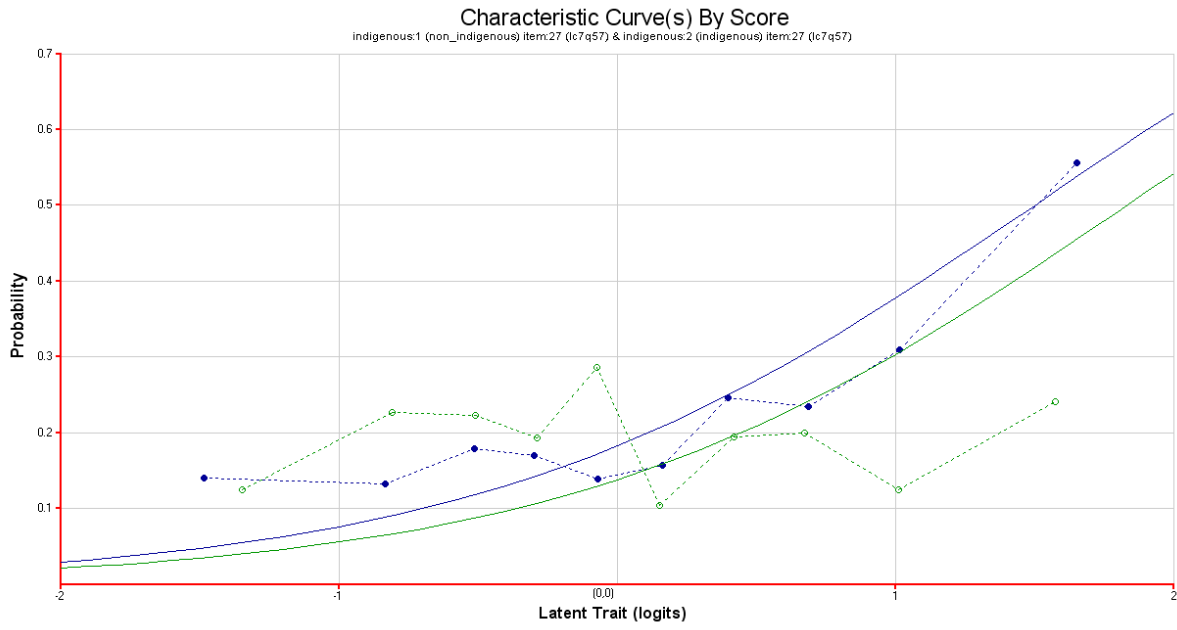
Item lc7q33



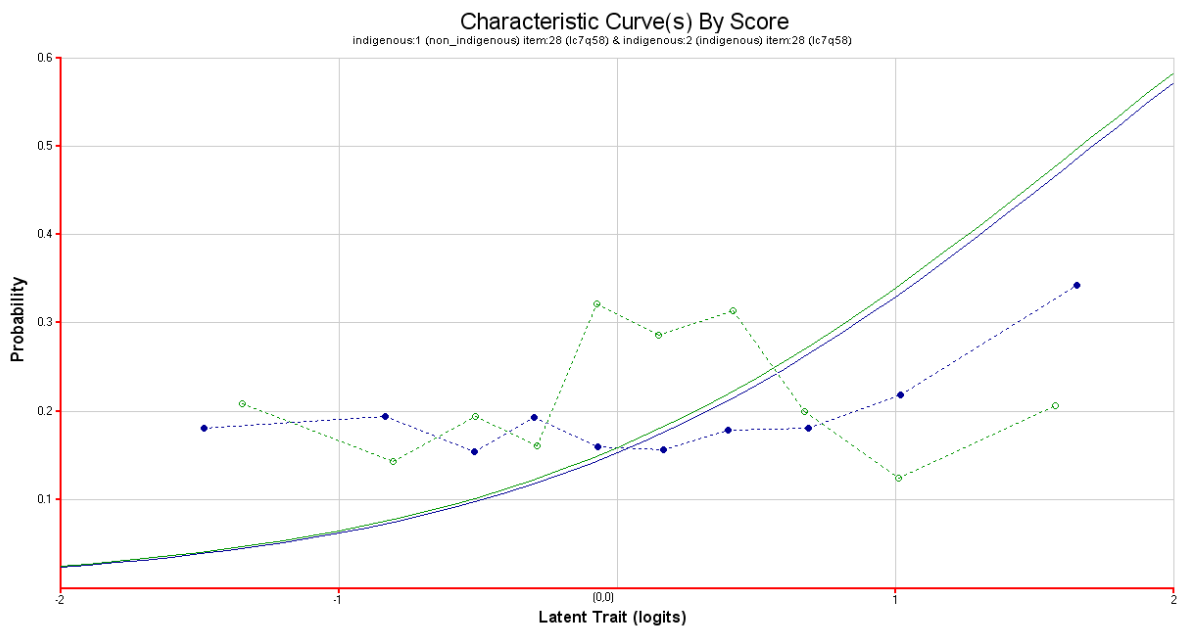
Item lc7q34



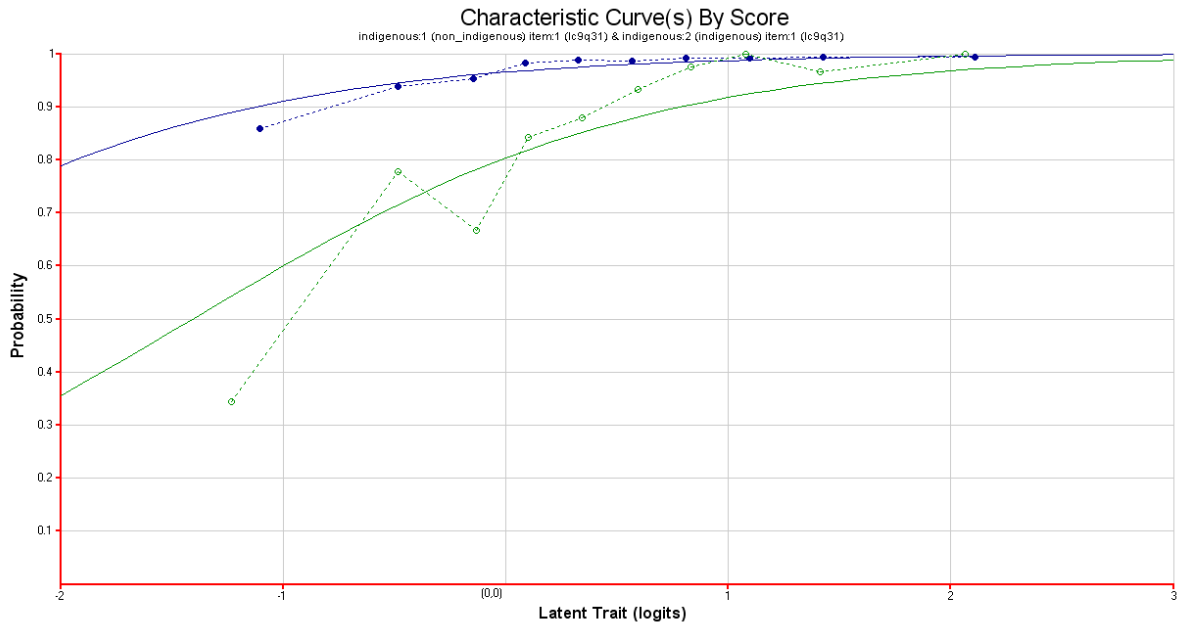
Item lc7q55



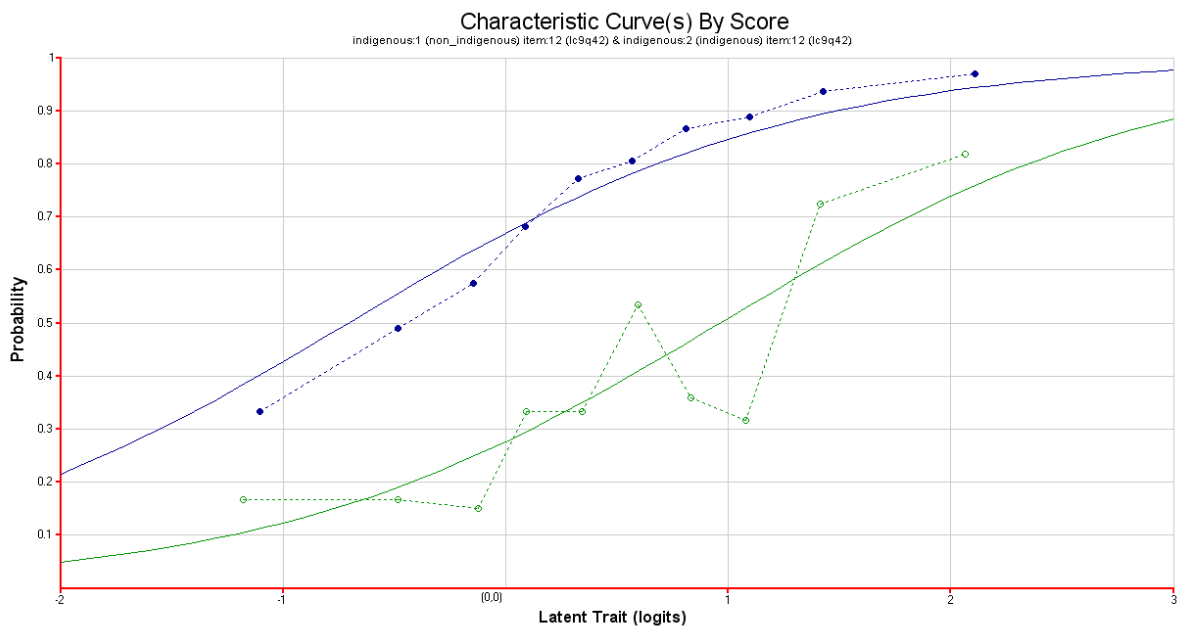
Item lc7q57



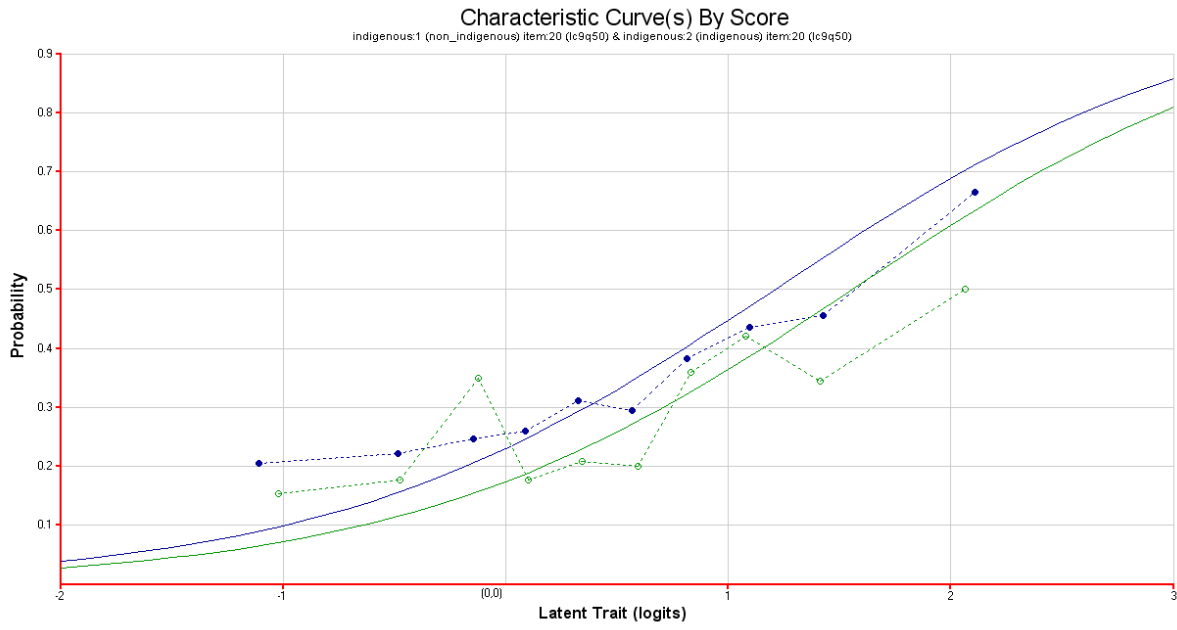
Item lc7q58



Item lc9q31



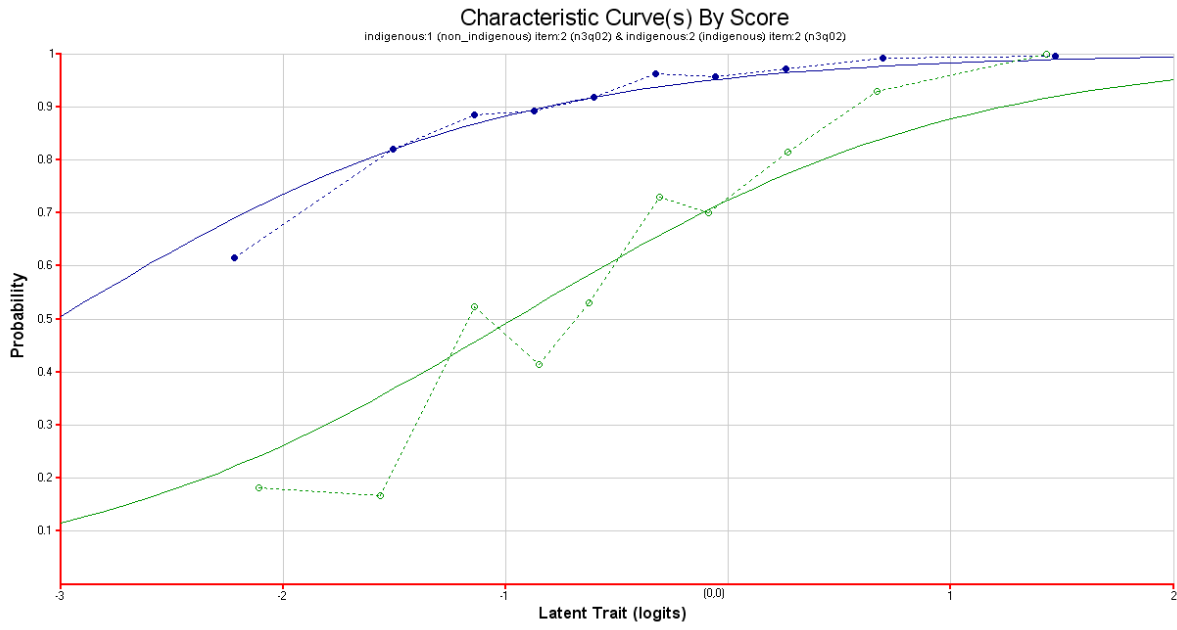
Item lc9q42



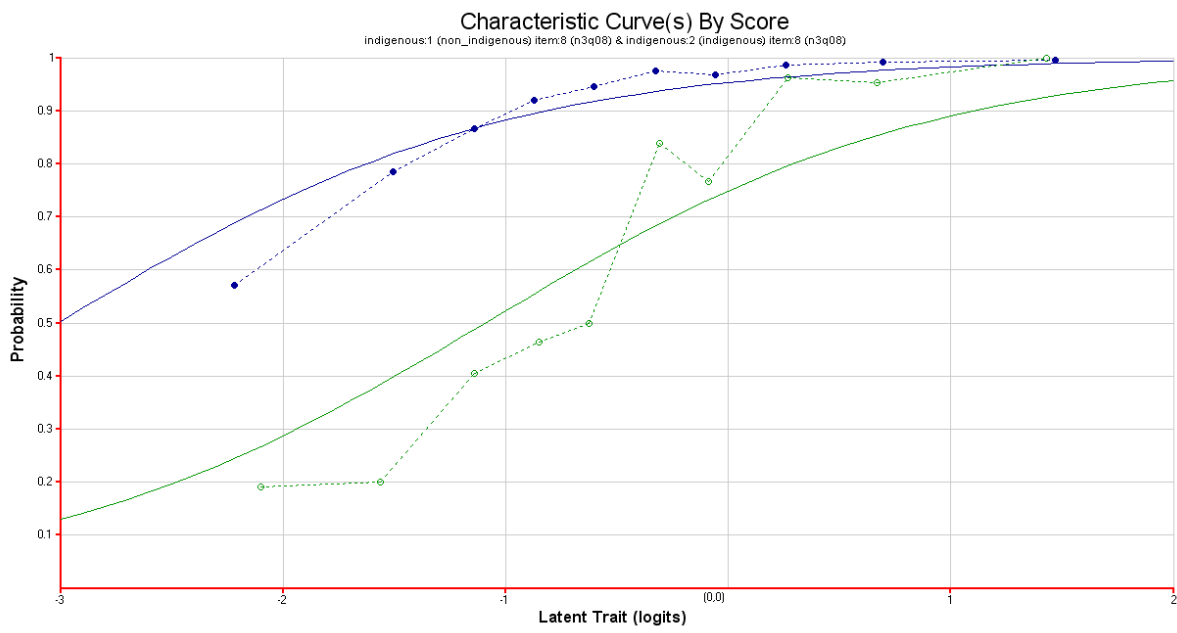
Item lc9q50



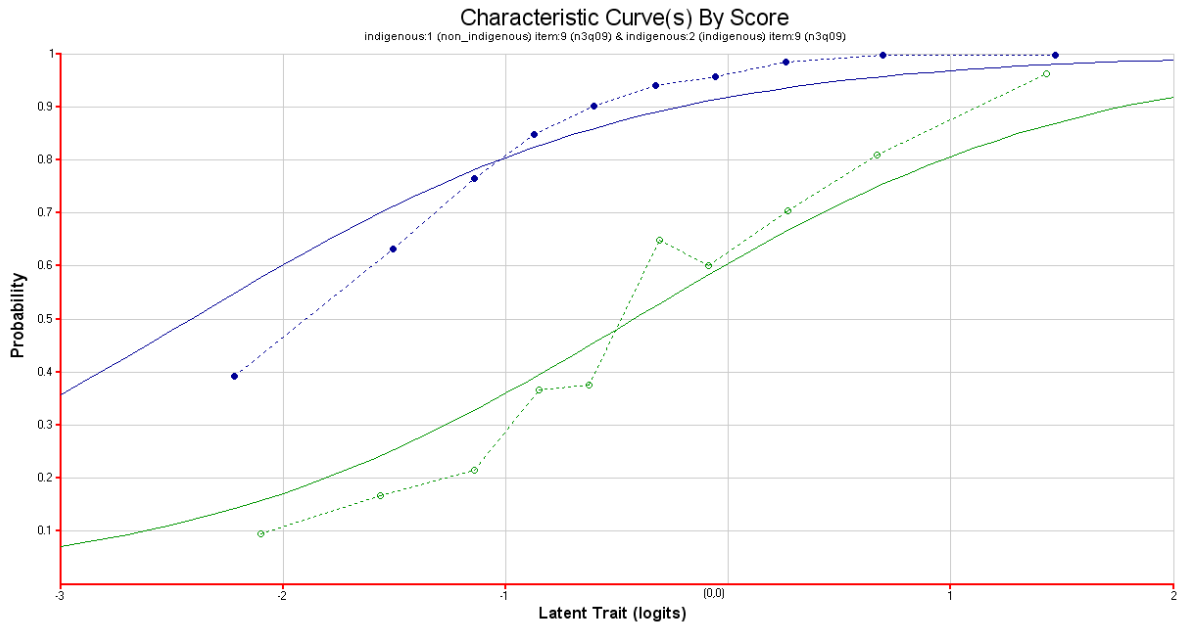
Item lc9q57



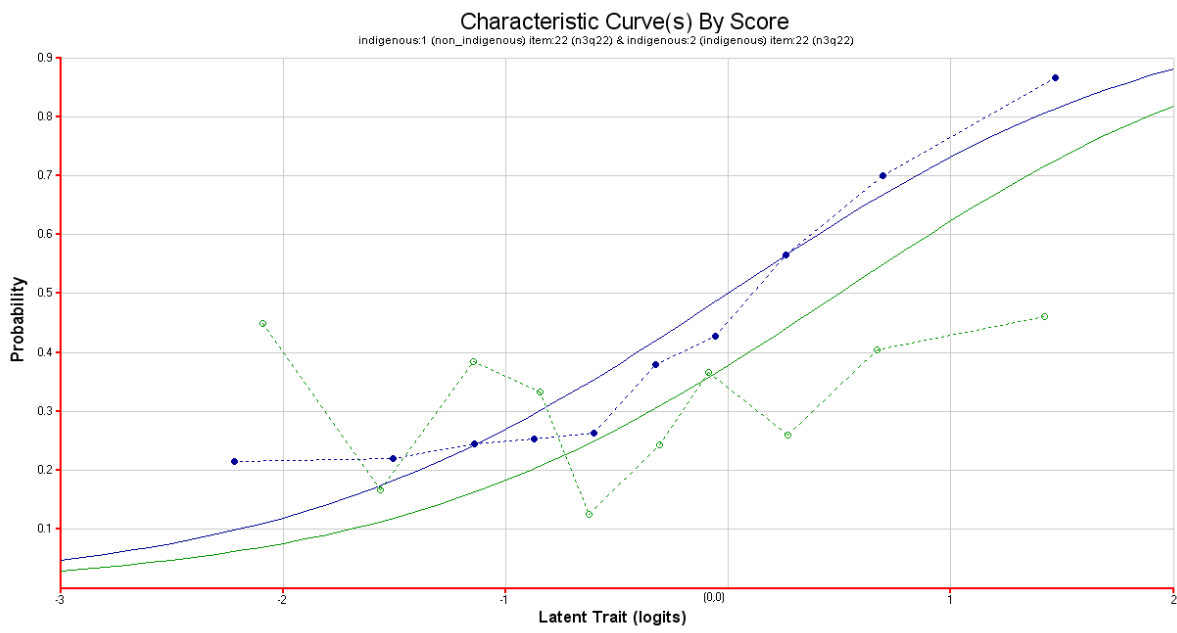
Item n3q02



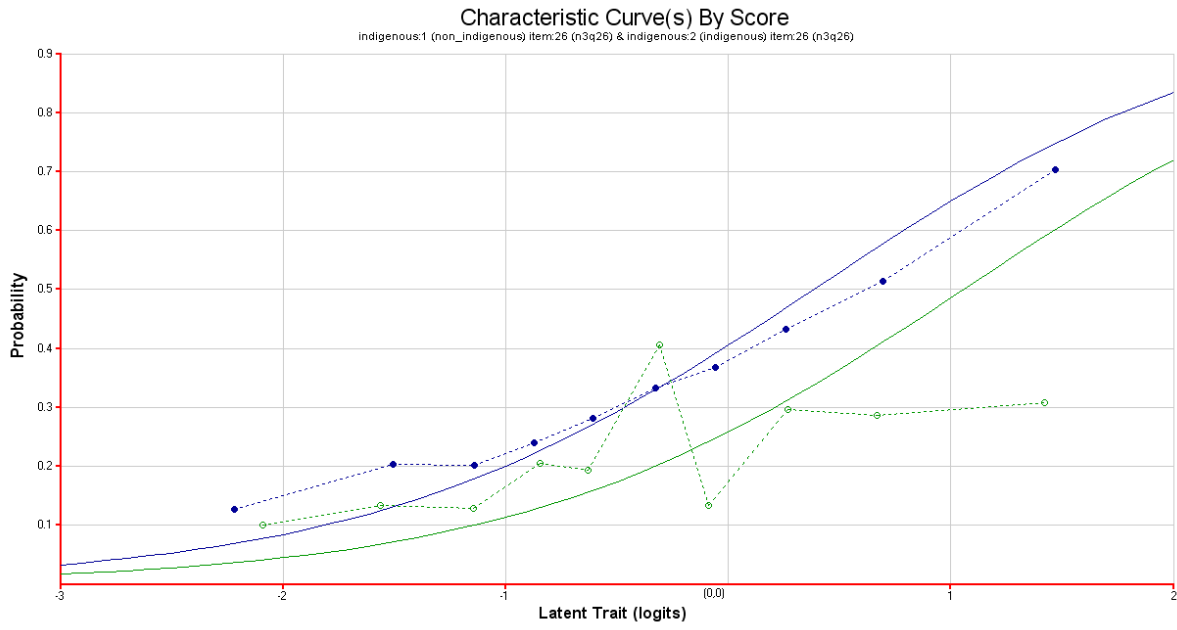
Item n3q08



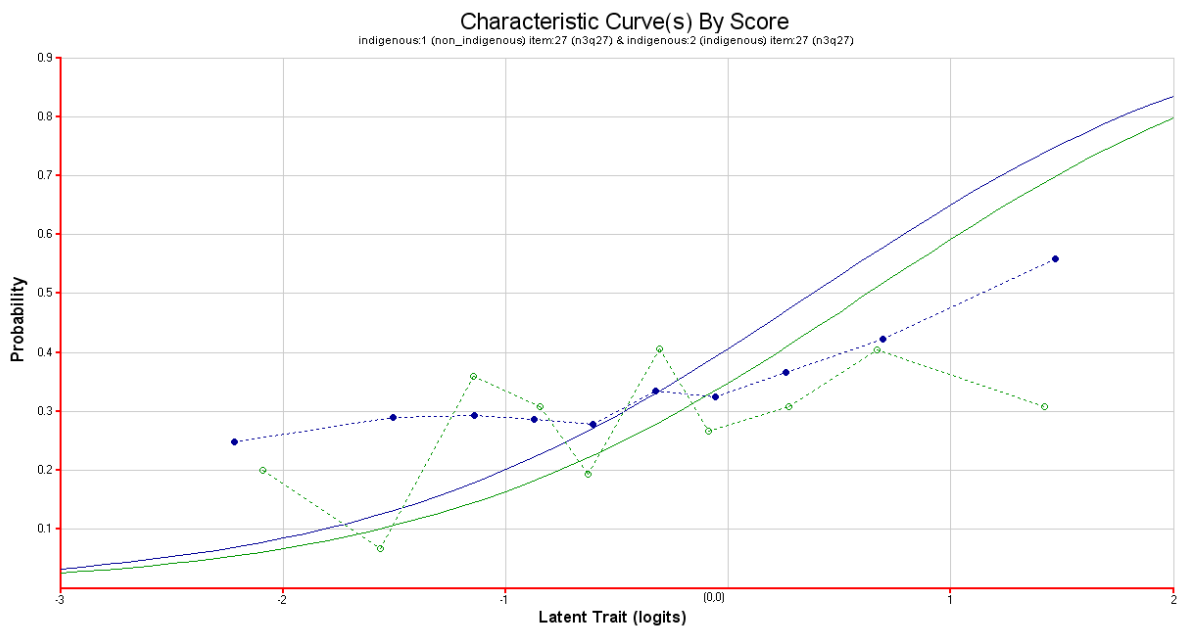
Item n3q09



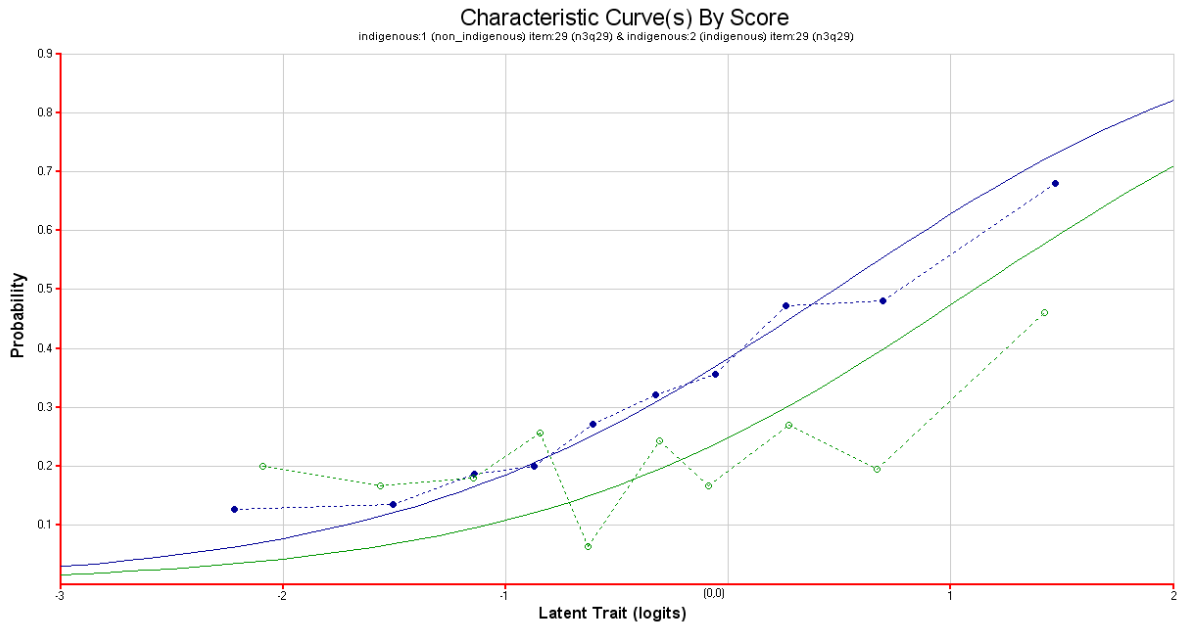
Item n3q22



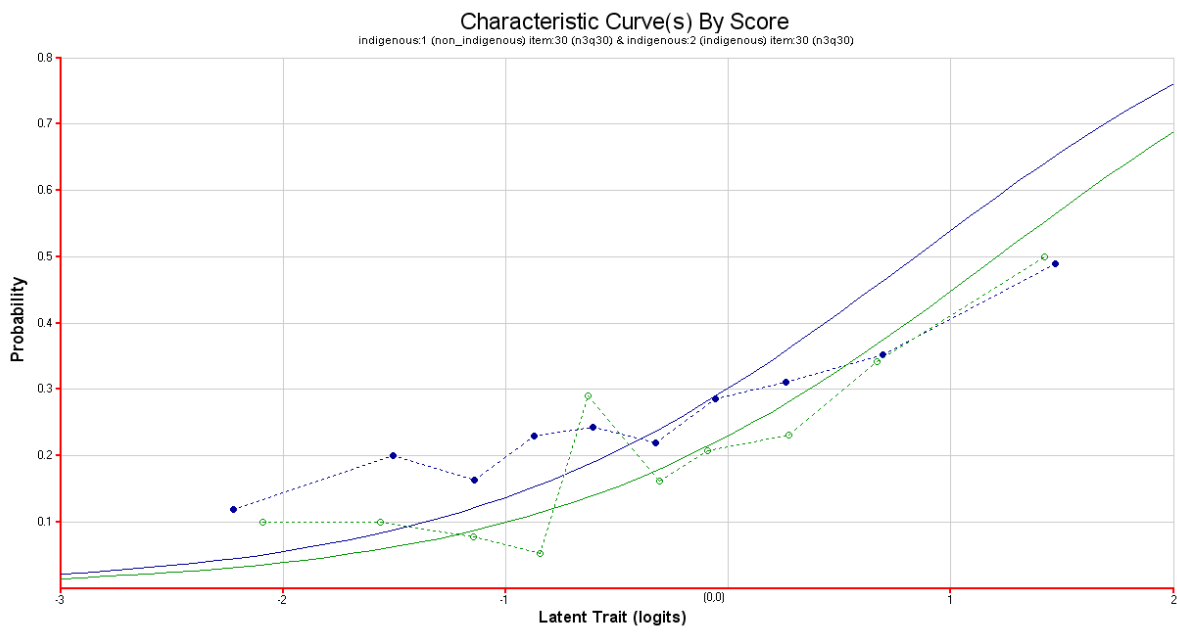
Item n3q26



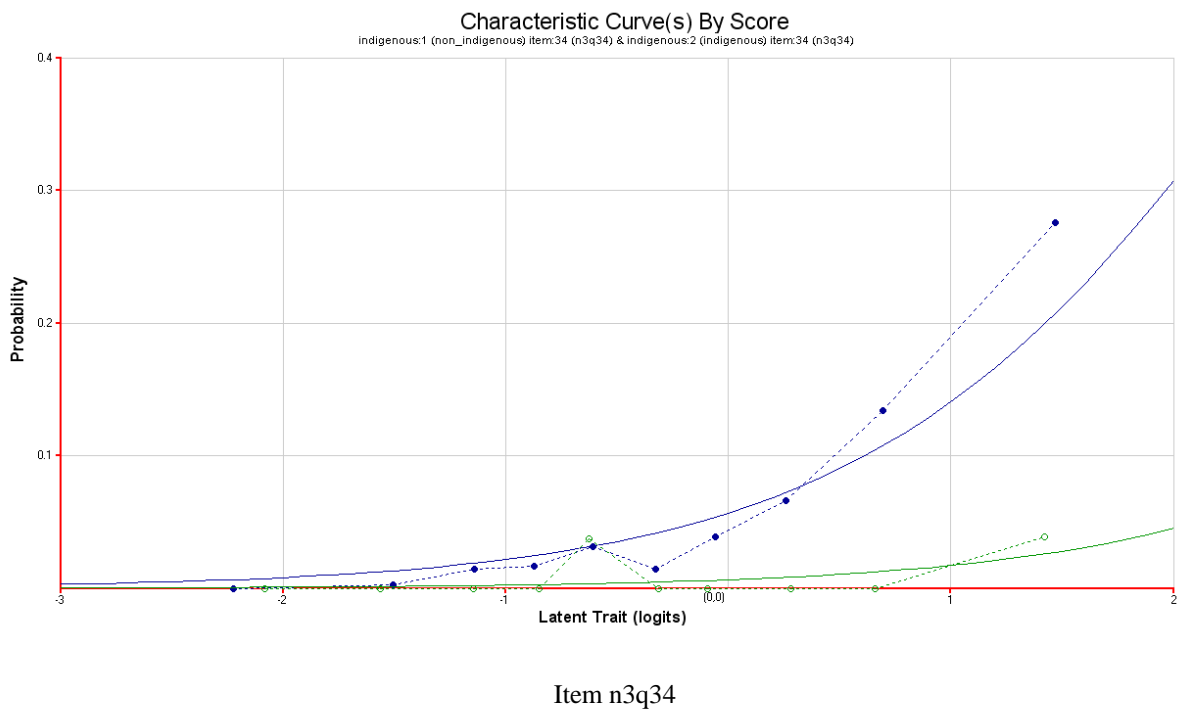
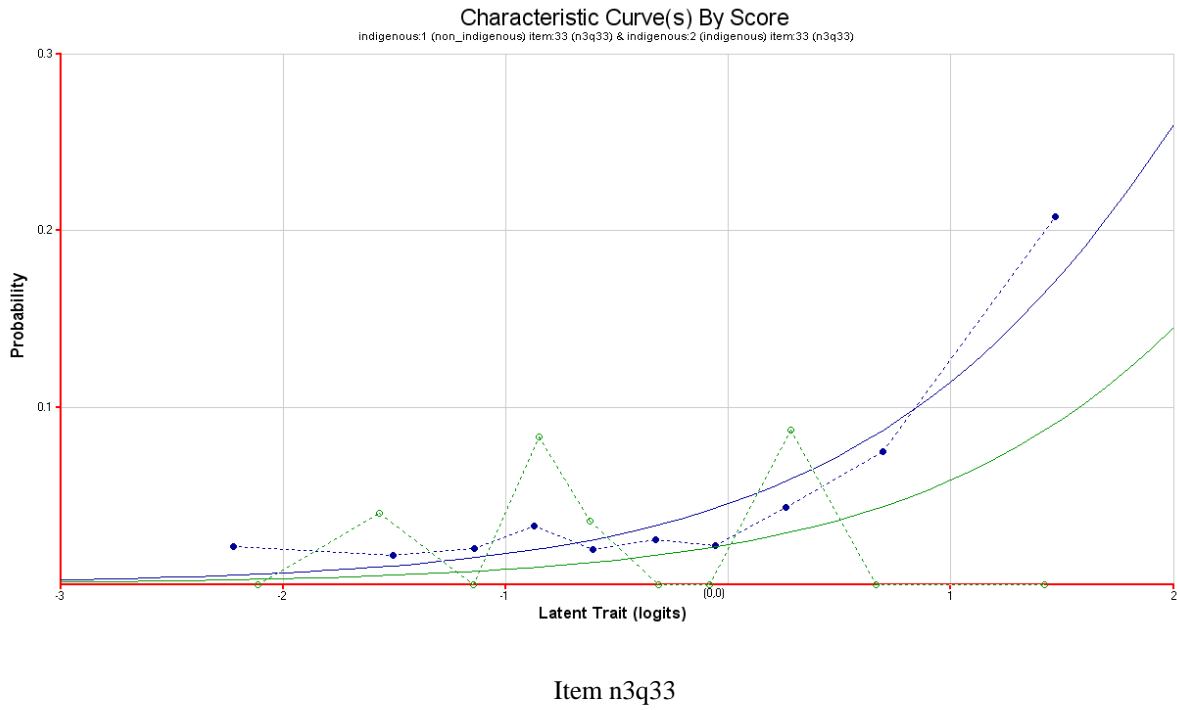
Item n3q27

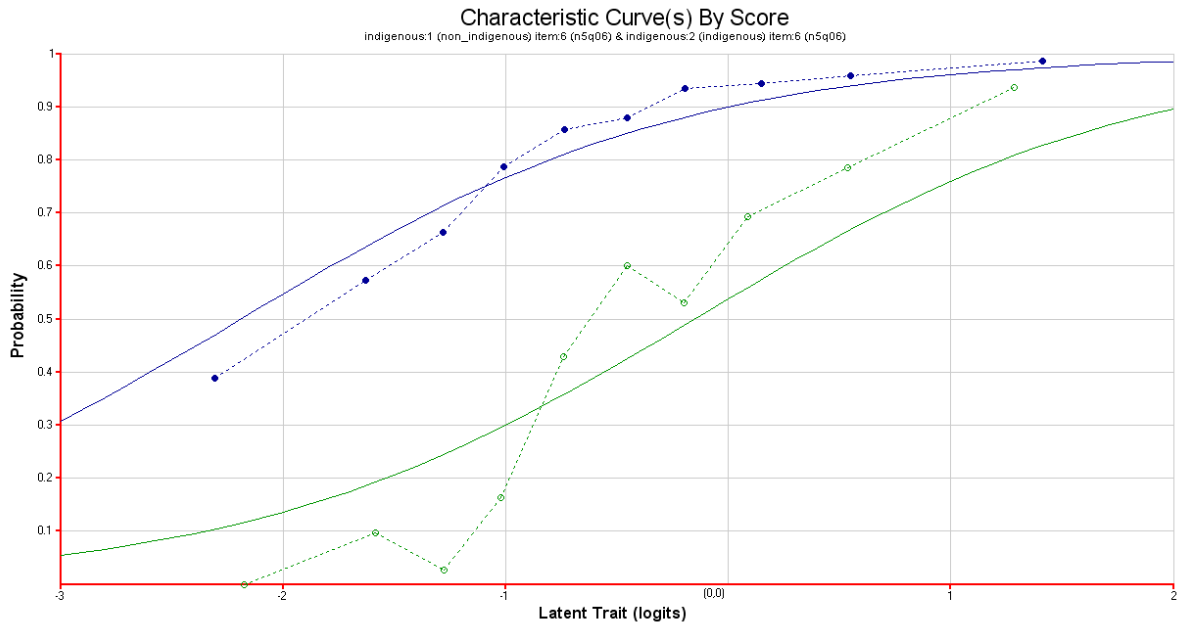


Item n3q29

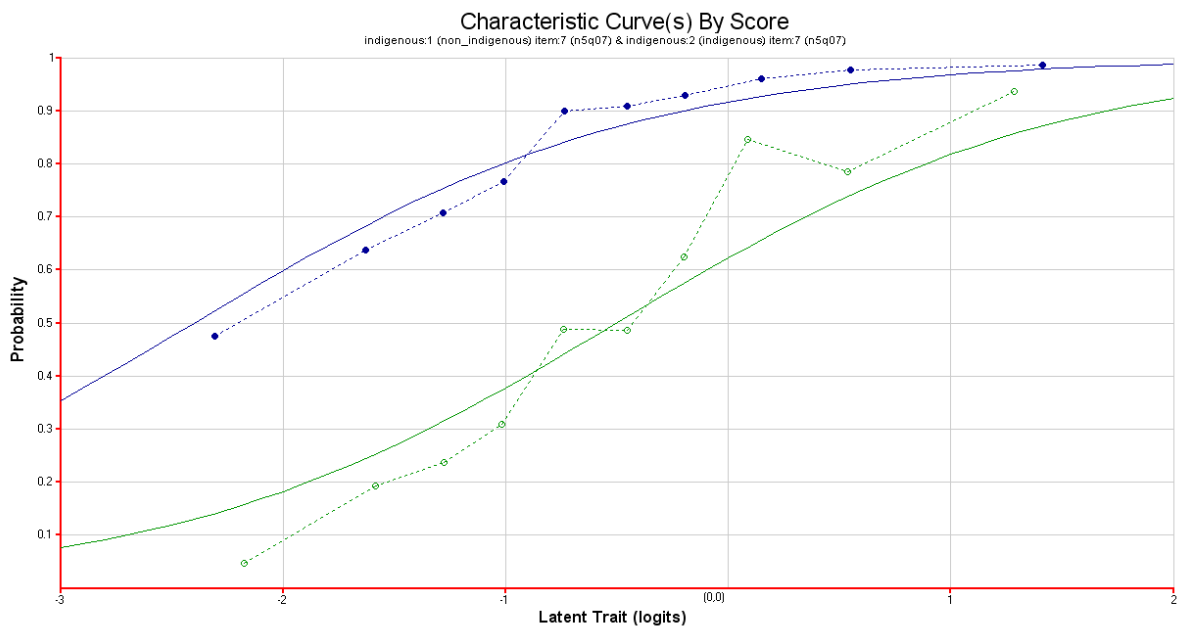


Item n3q30

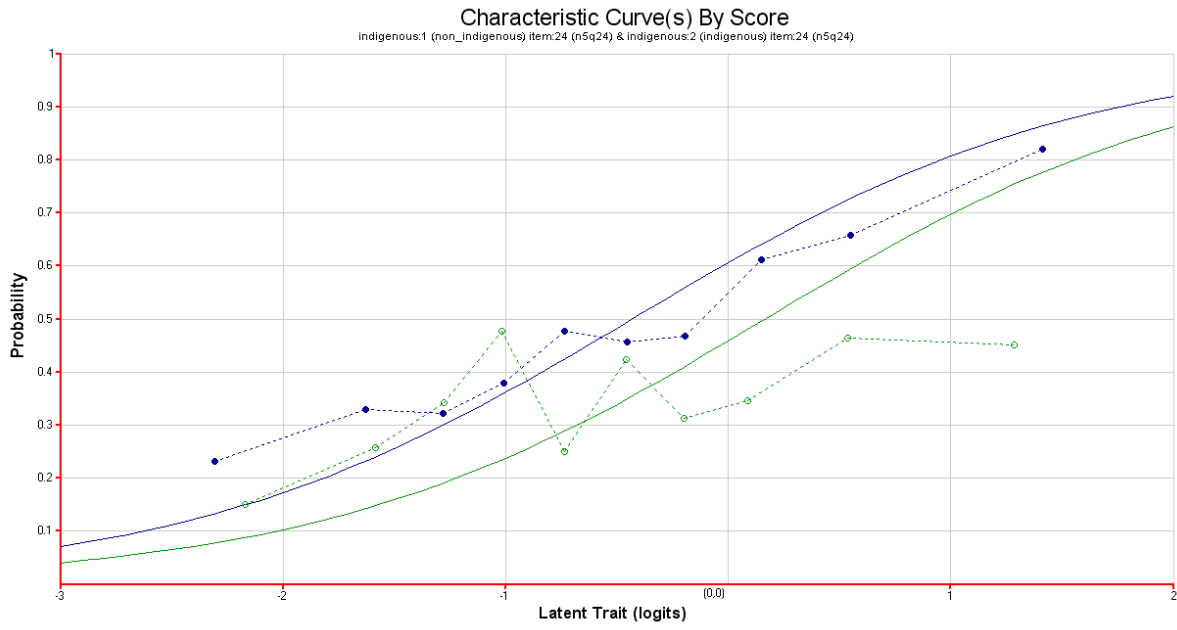




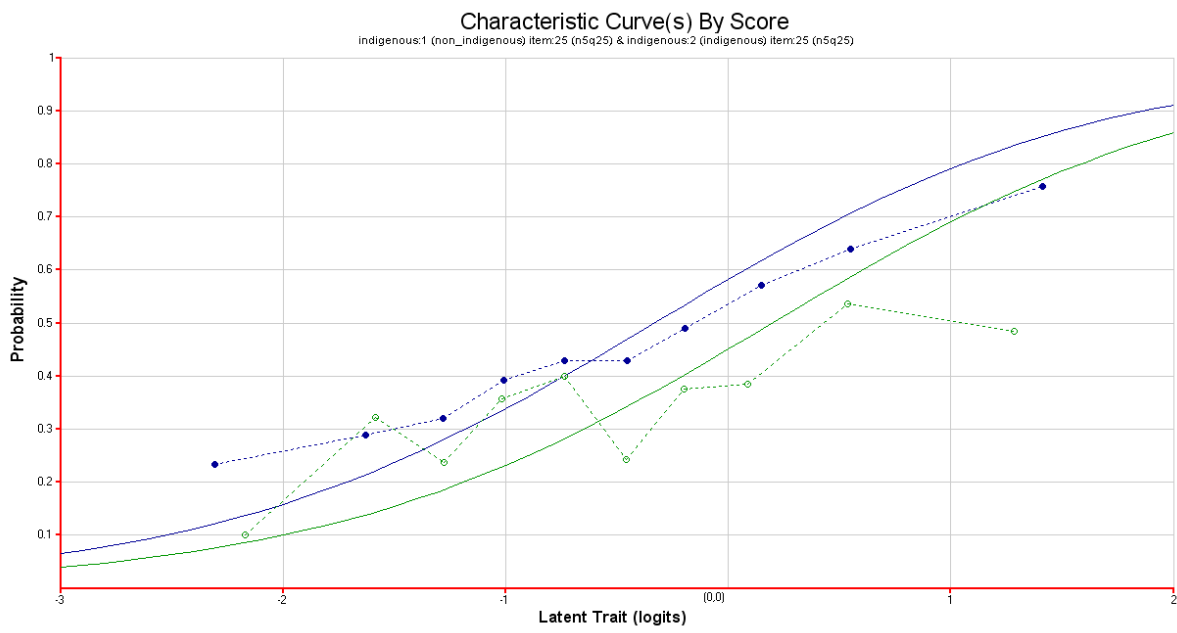
Item n5q06



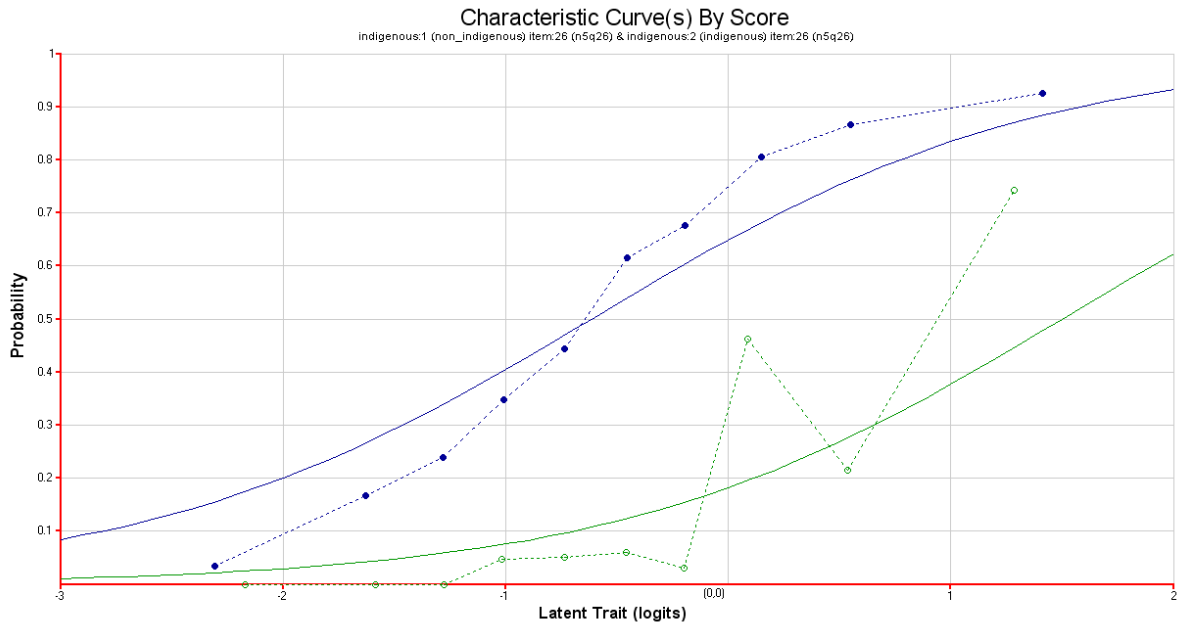
Item n5q07



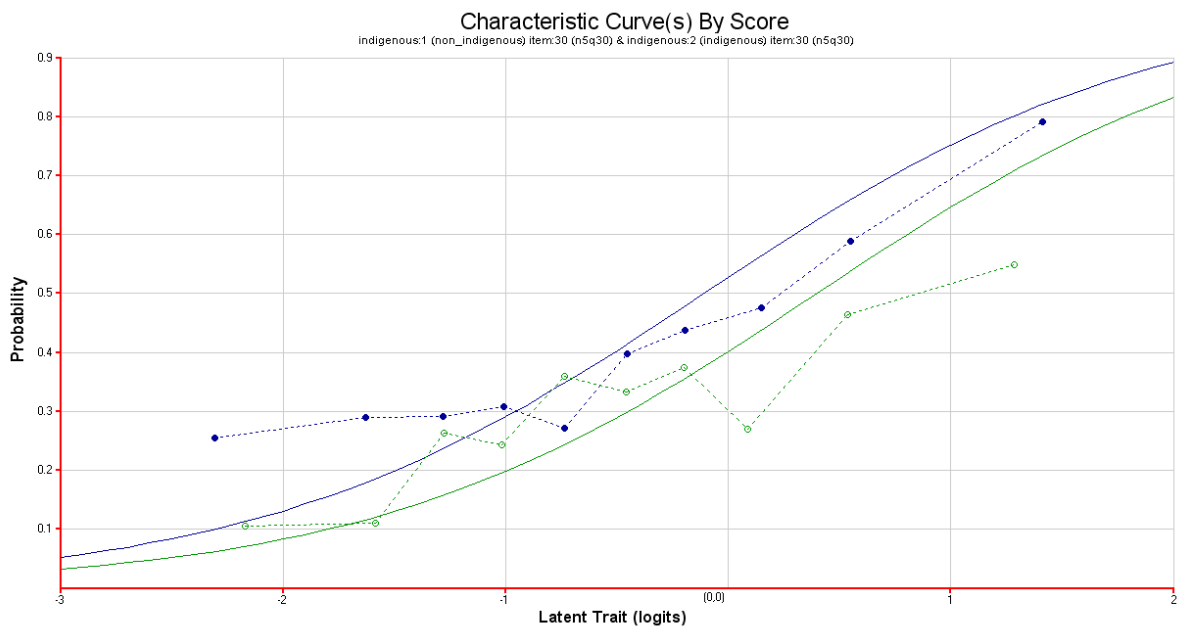
Item n5q24



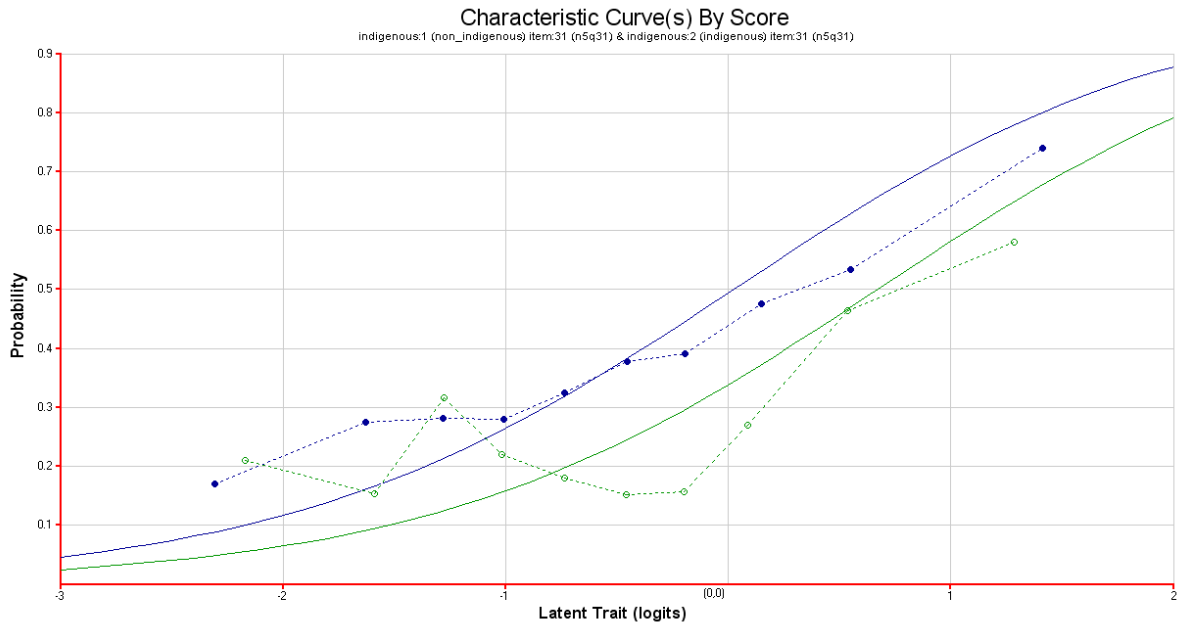
Item n5q25



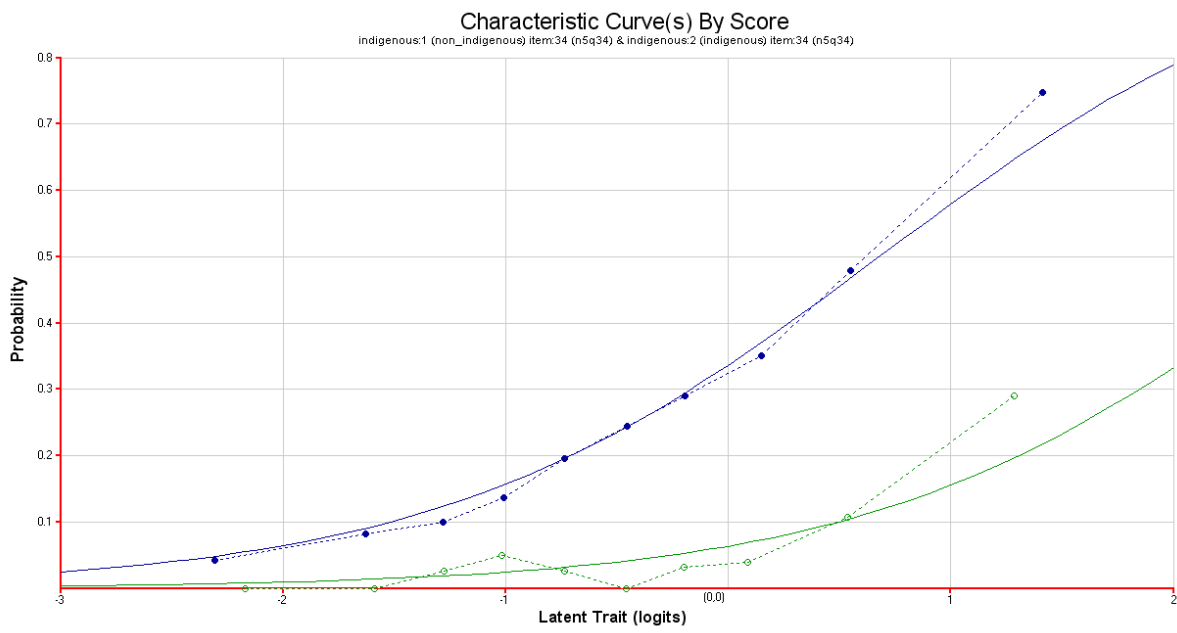
Item n5q26



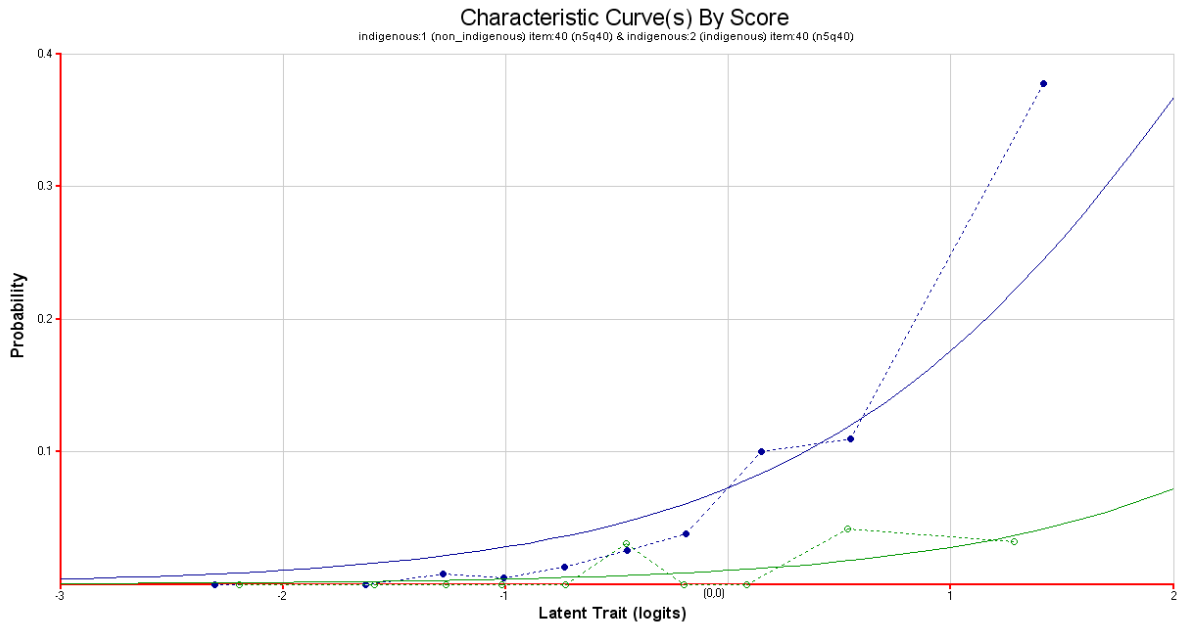
Item n5q30



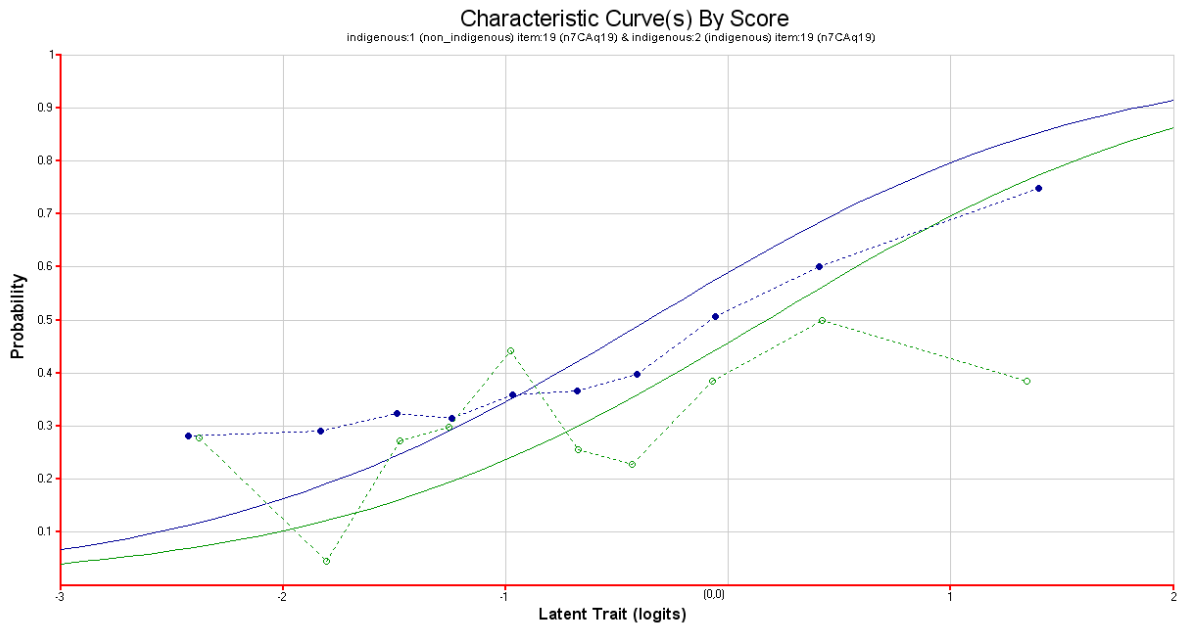
Item n5q31



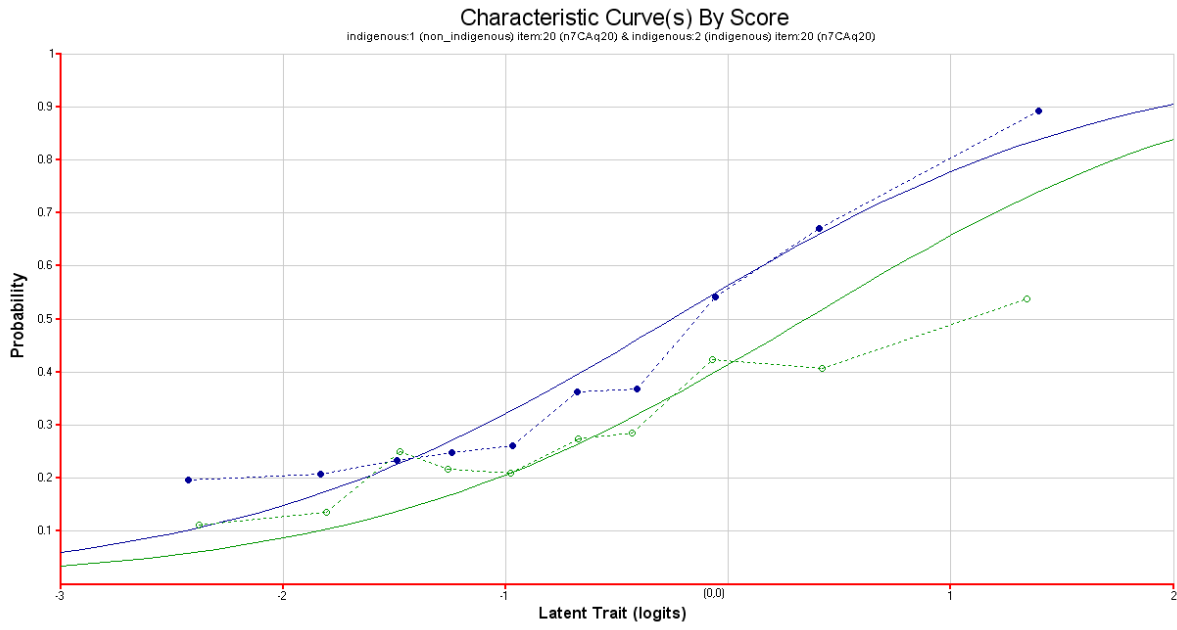
Item n5q34



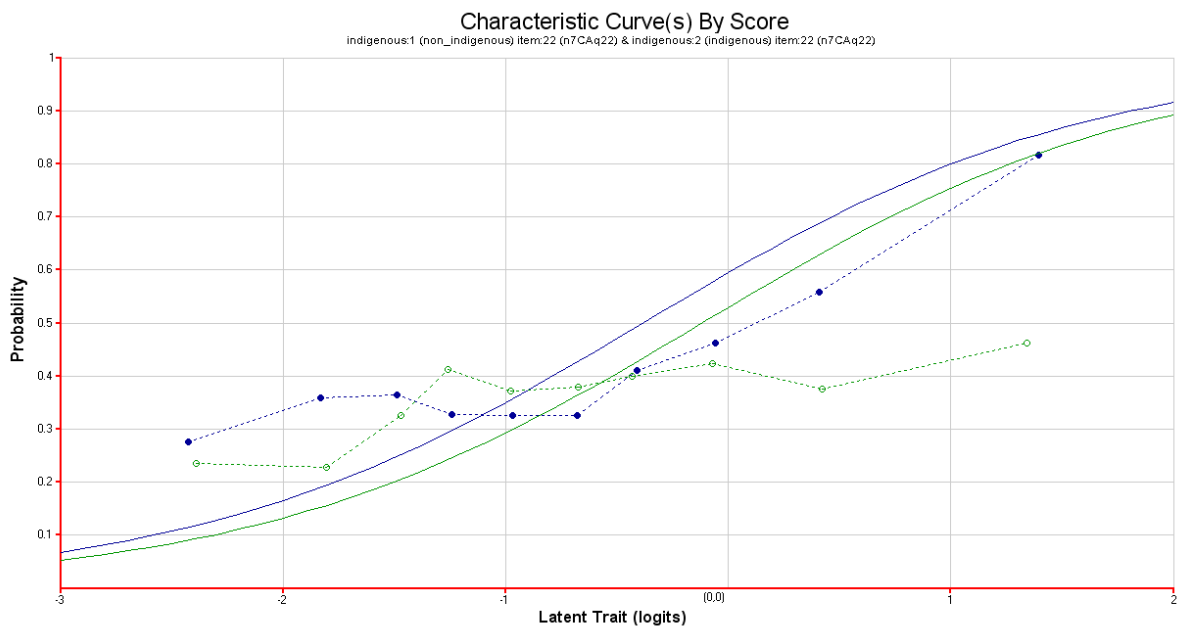
Item n5q40



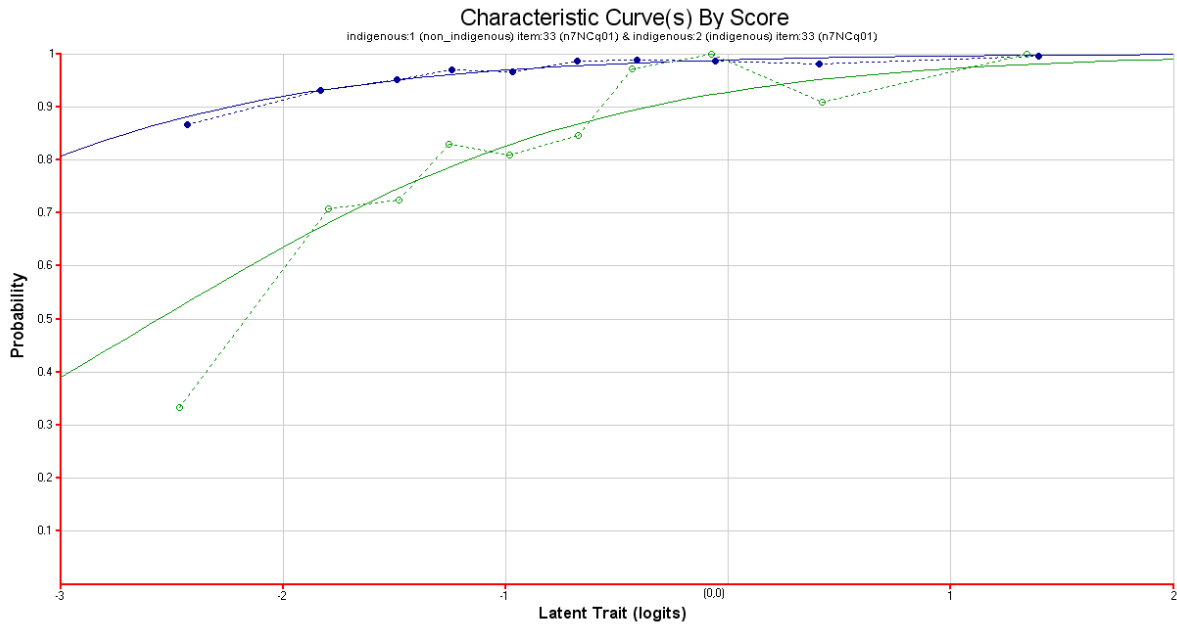
Item n7CAq19



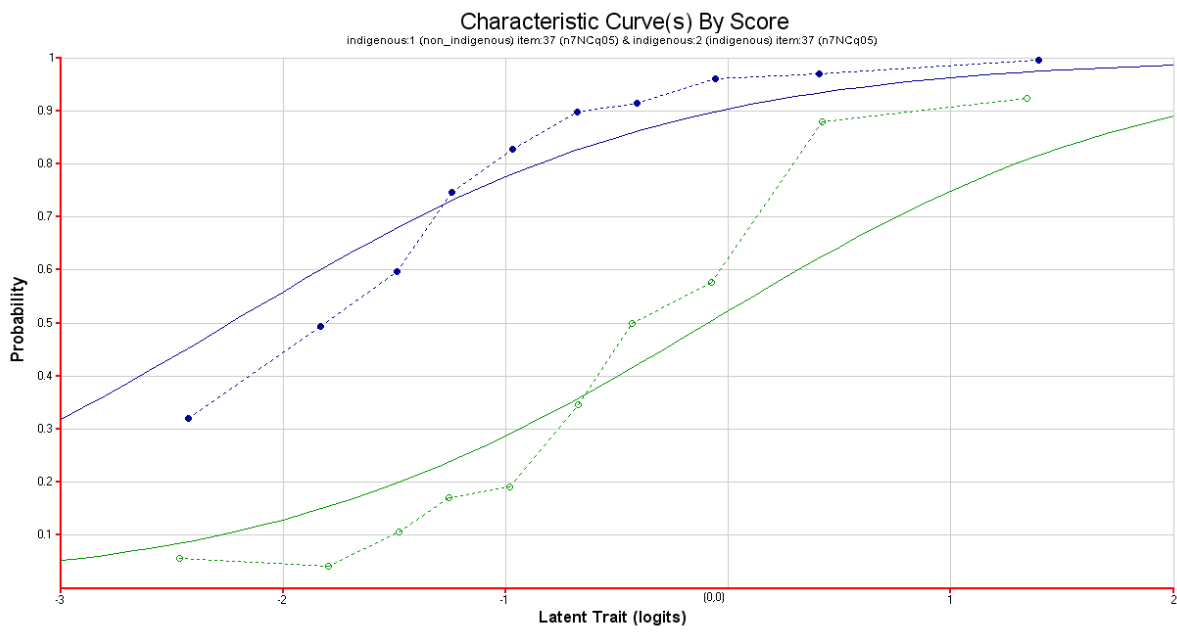
Item n7CAq20



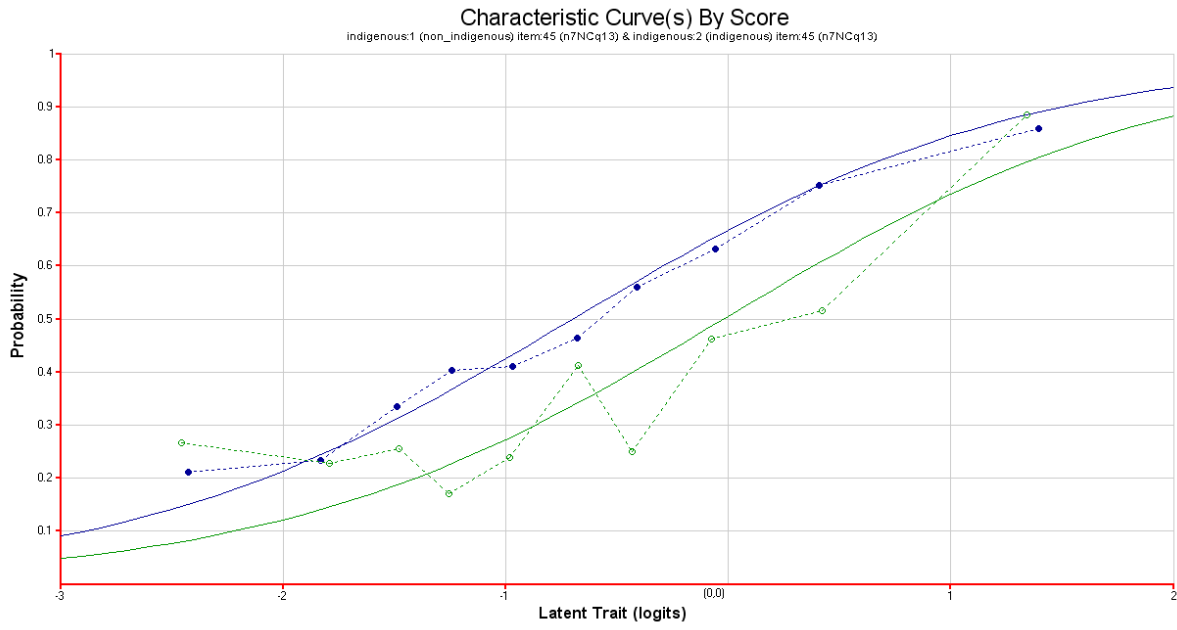
Item n7CAq22



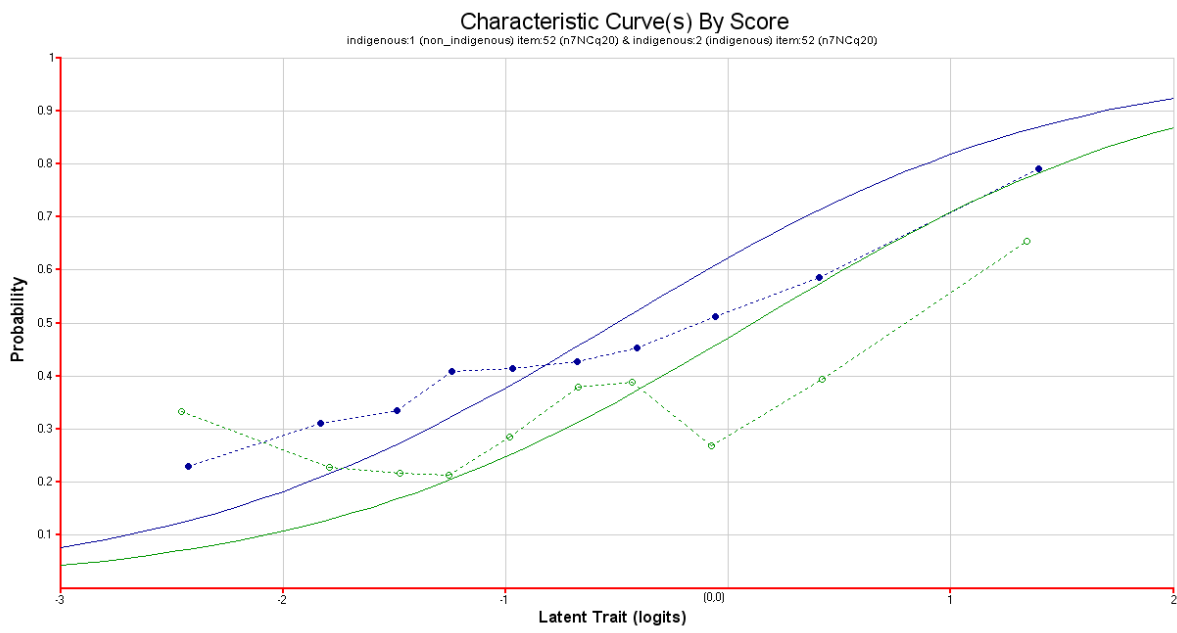
Item n7NCq01



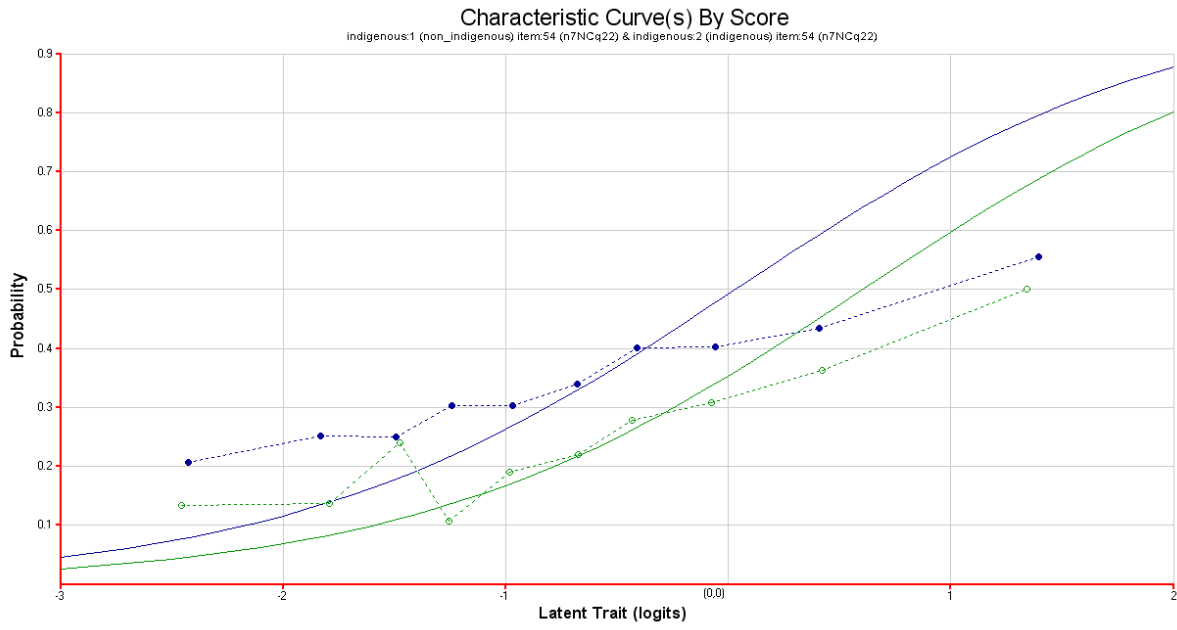
Item n7NCq05



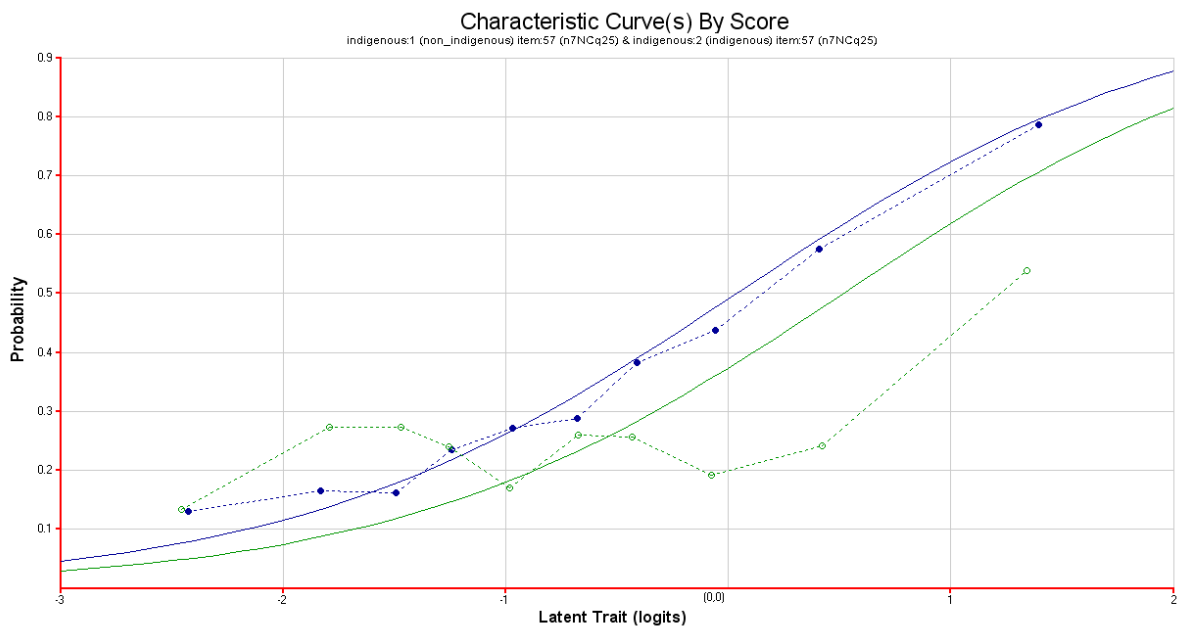
Item n7NCq13



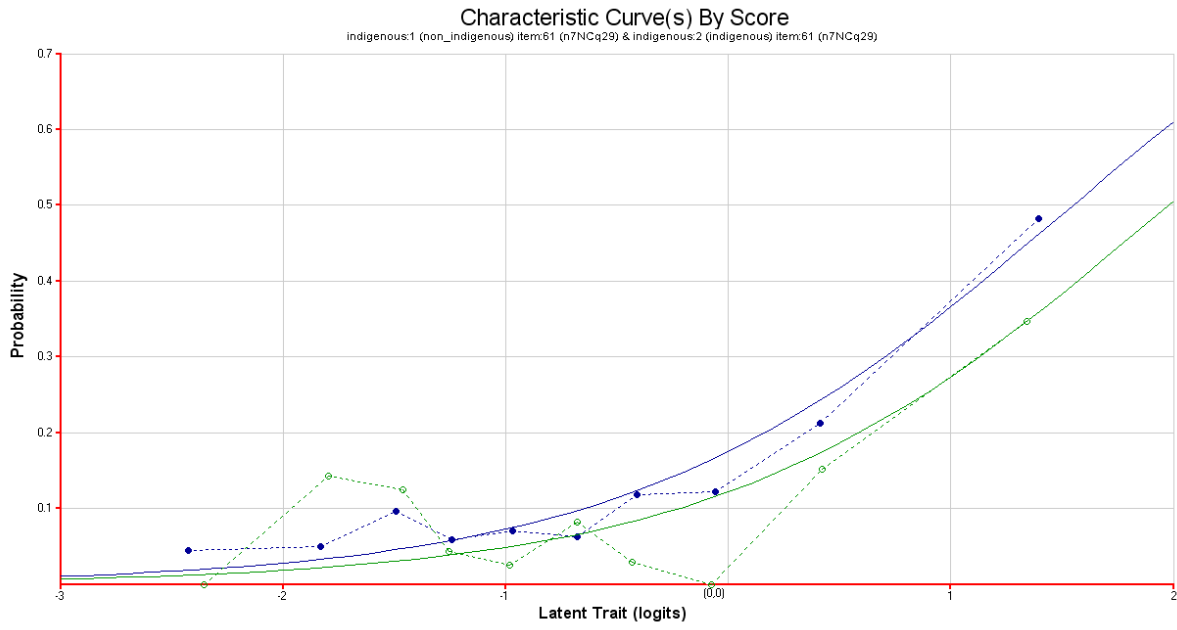
Item n7NCq20



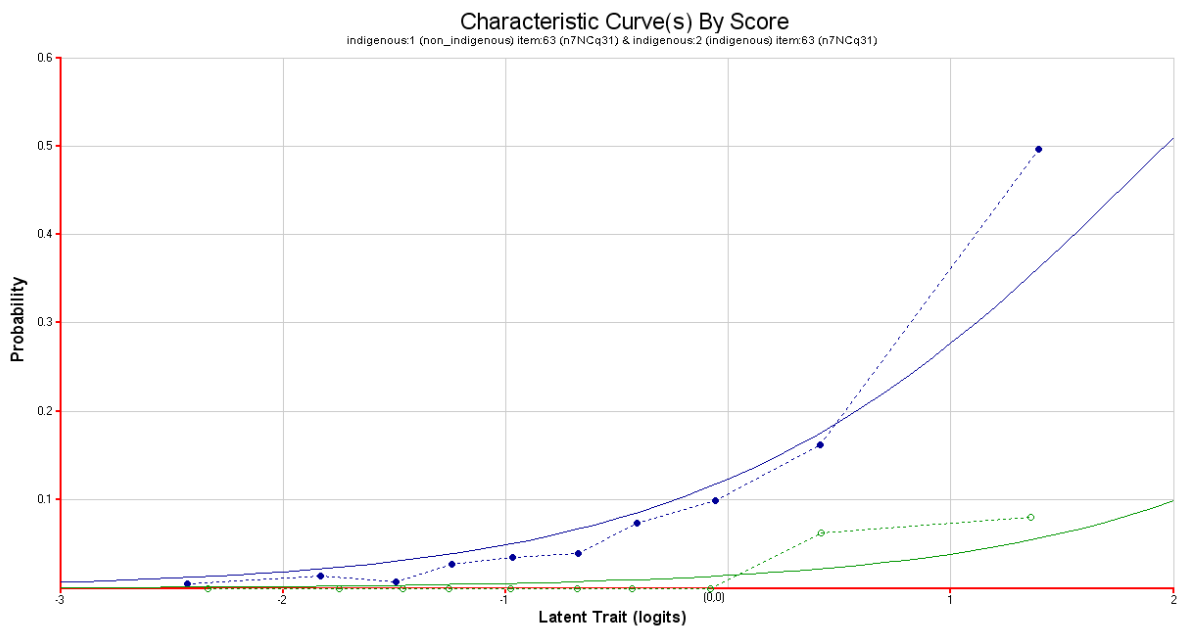
Item n7NCq22



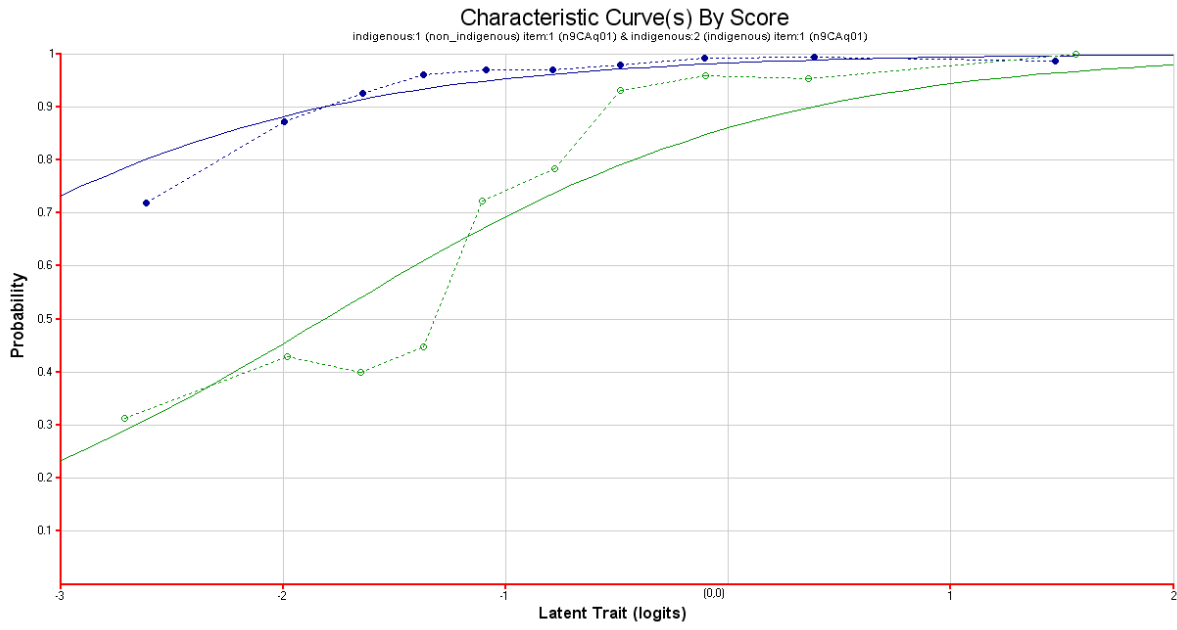
Item n7NCq25



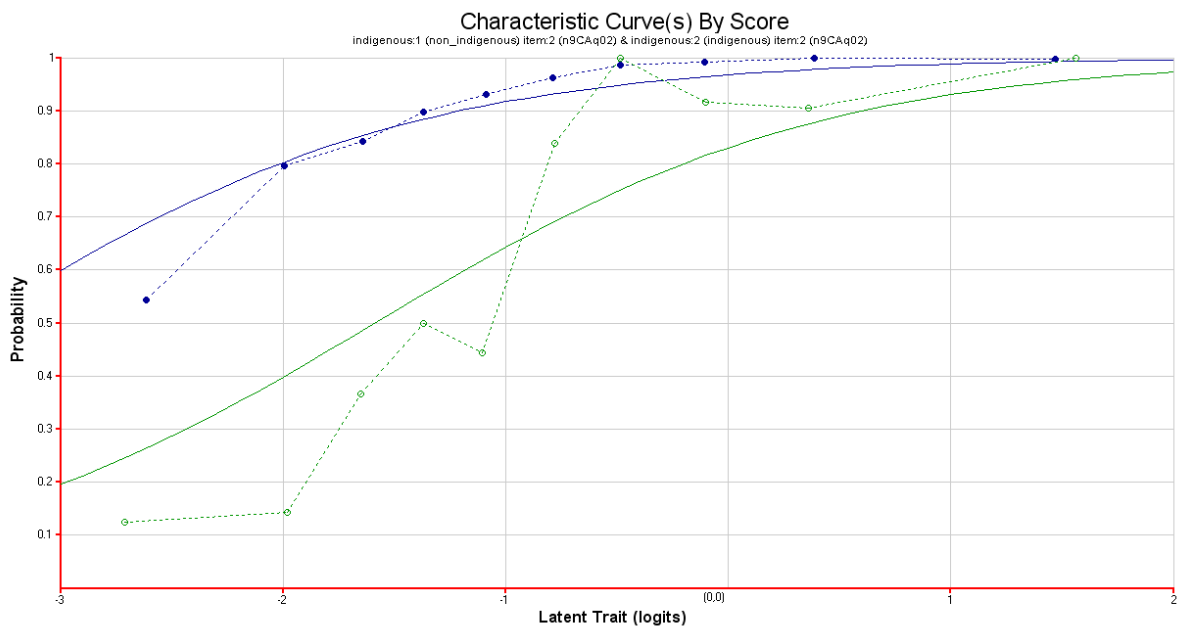
Item n7NCq29



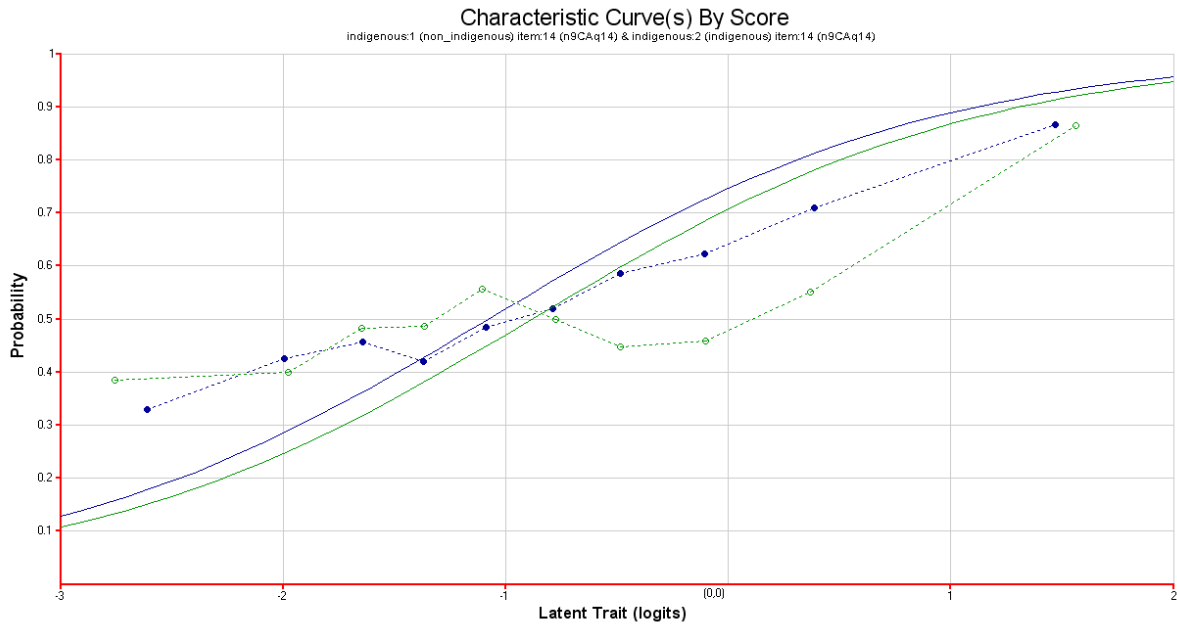
Item n7NCq31



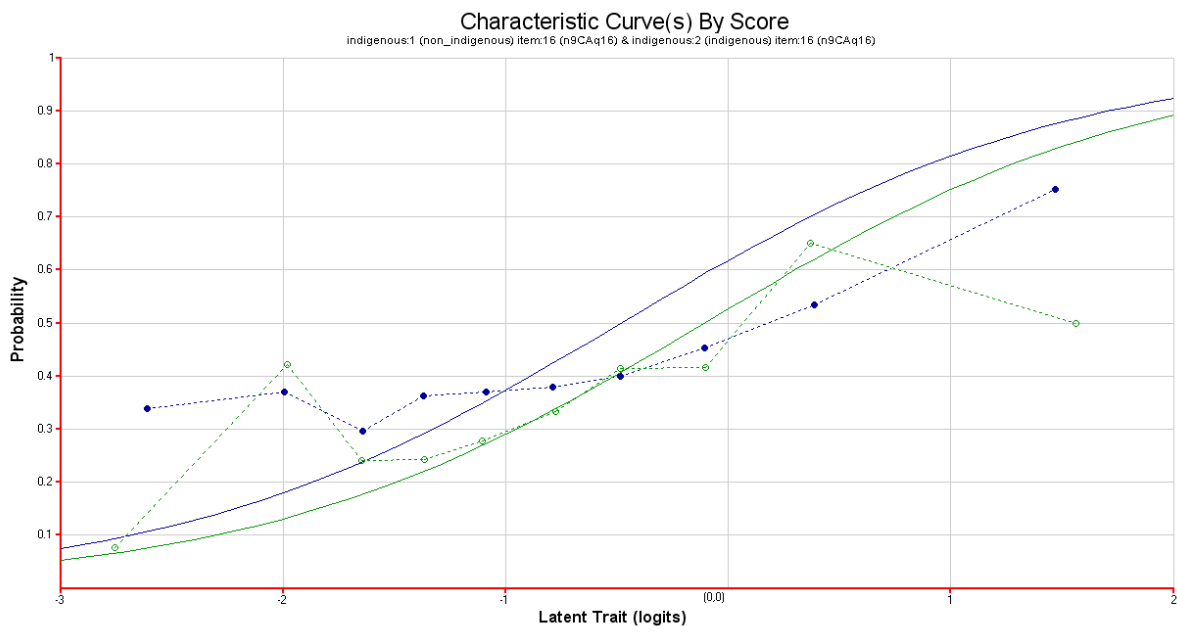
Item n9CAq01



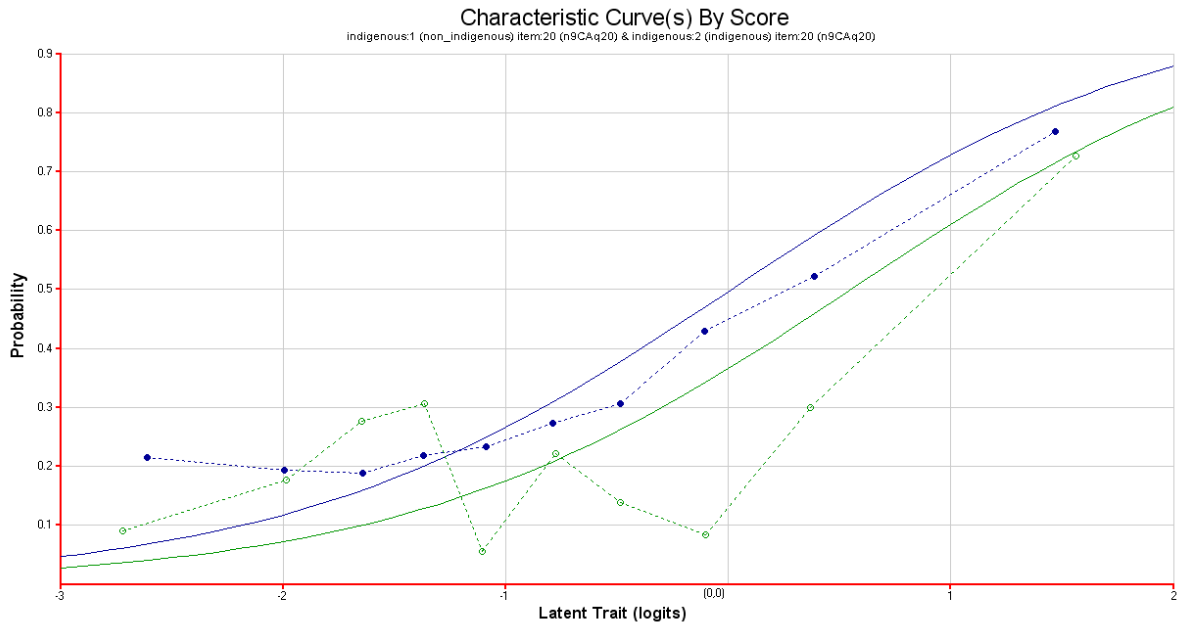
Item n9CAq02



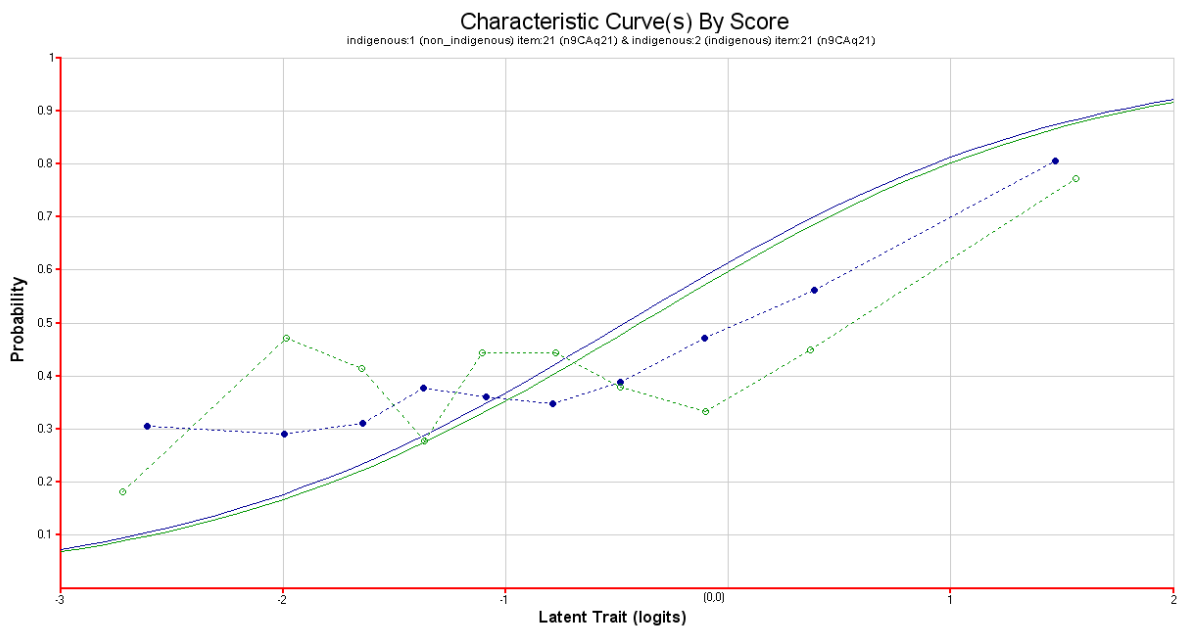
Item n9CAq14



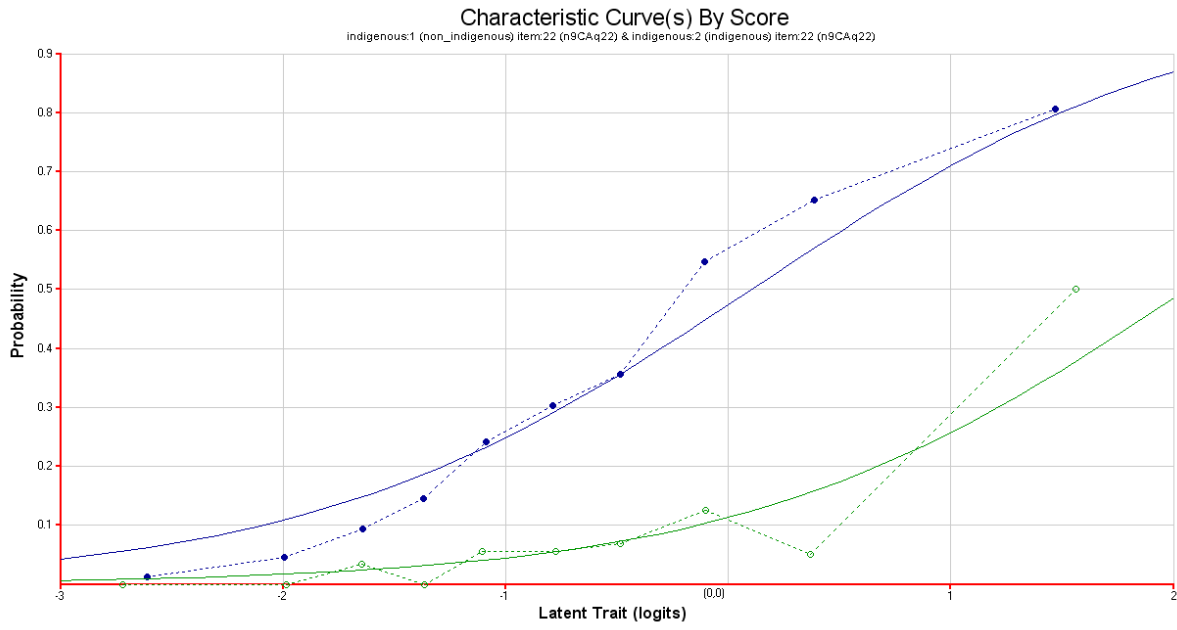
Item n9CAq16



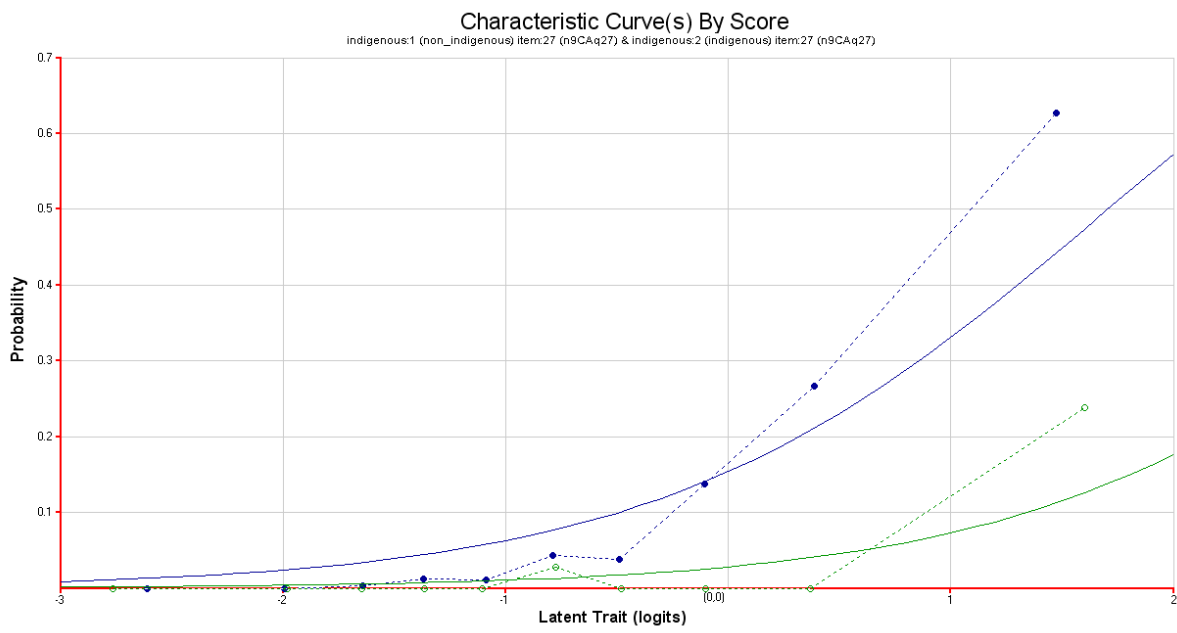
Item n9CAq20



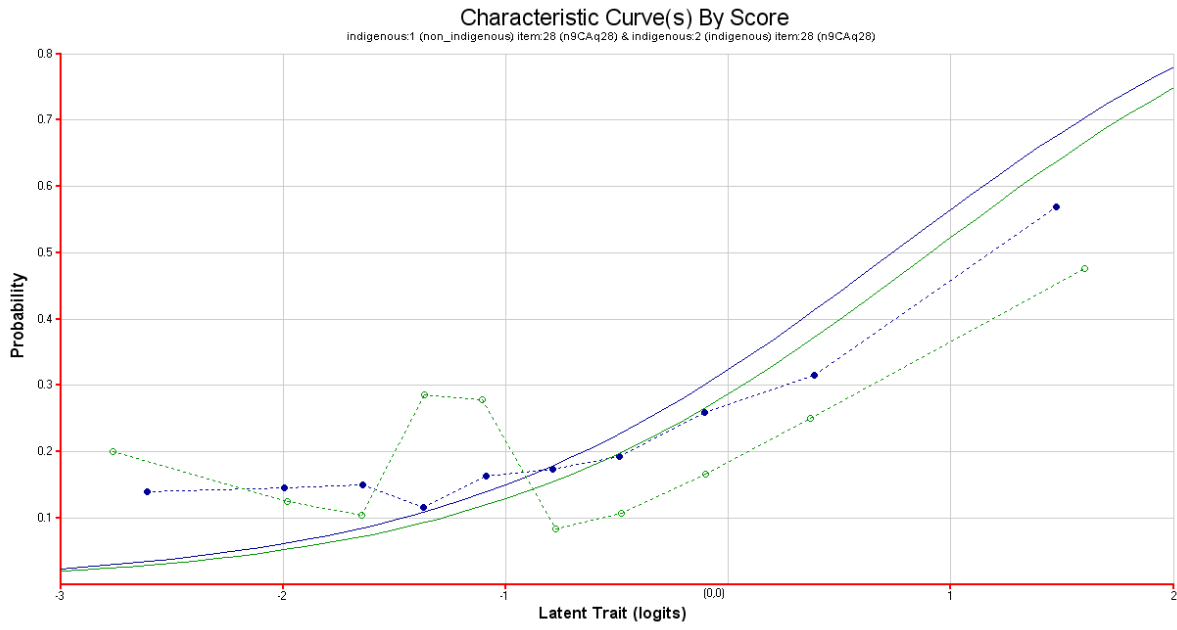
Item n9CAq21



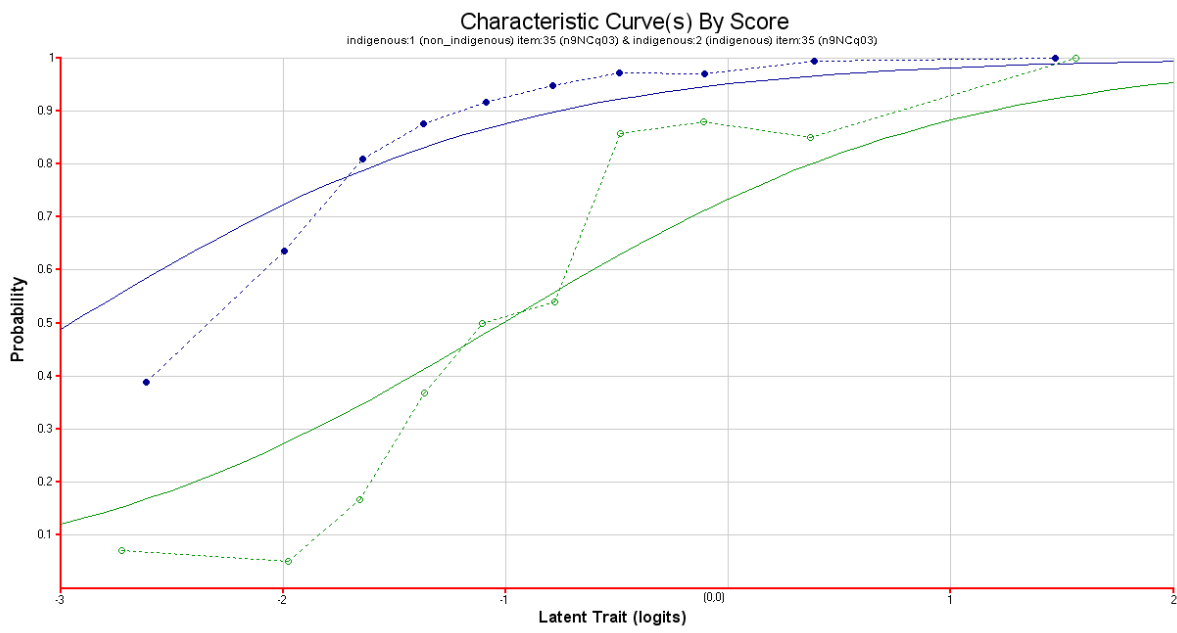
Item n9CAq22



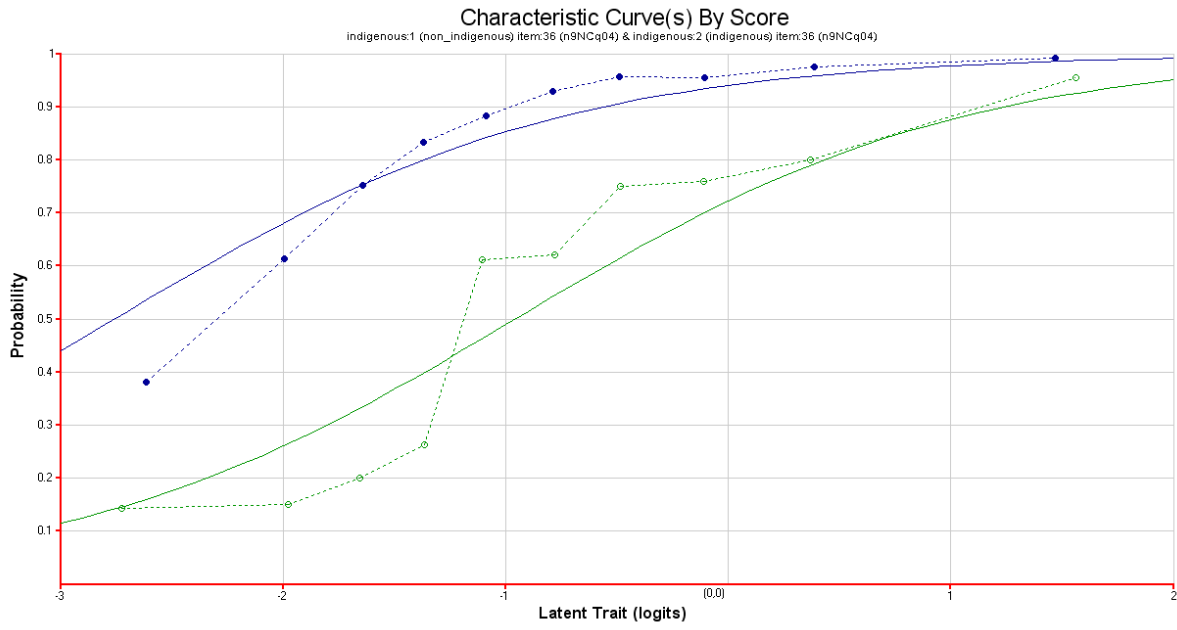
Item n9CAq27



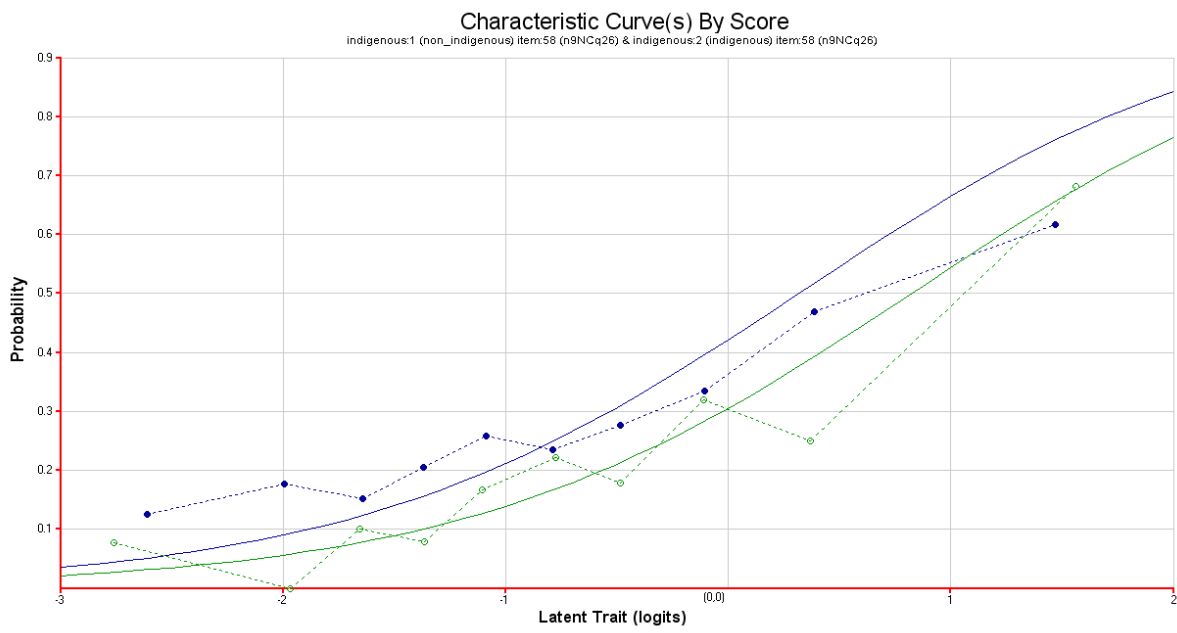
Item n9CAq28



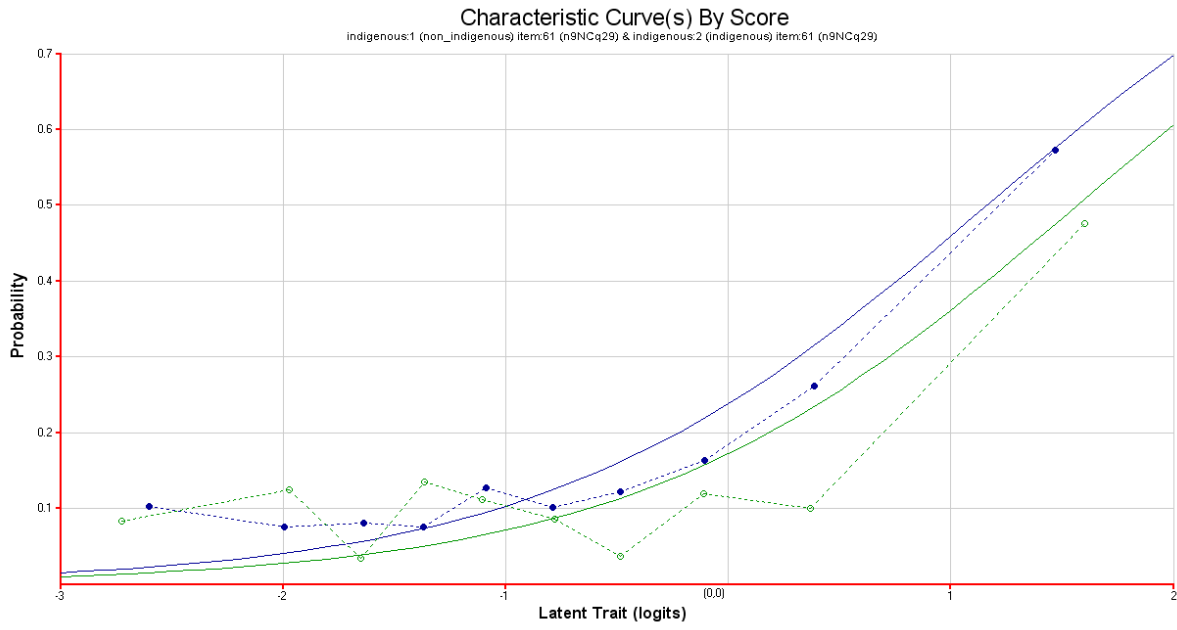
Item n9NCq03



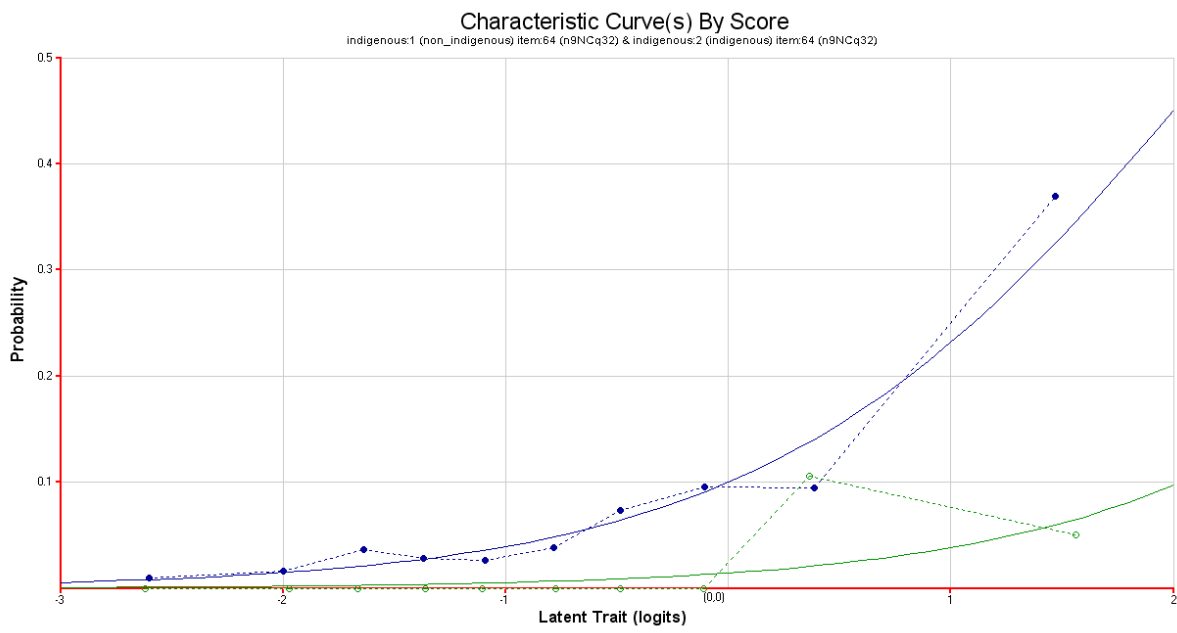
Item n9NCq04



Item n9NCq26



Item n9NCq29



Item n9NCq32

APPENDIX I. DIF BY DOMAIN BY YEAR LEVEL

Table I.1 Year 3 G&P Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
lc3q26	0.262	0.841	1.215
lc3q27	0.520	1.029	0.339
lc3q28	0.085	0.753	0.303
lc3q29	-0.058	0.098	0.132
lc3q30	0.060	0.366	0.145
lc3q31	0.000	0.030	-0.002
lc3q32	0.086	0.563	0.048
lc3q33	0.213	0.468	0.203
lc3q34	0.225	0.085	-0.318
lc3q35	0.204	0.347	-0.290
lc3q36	0.218	0.559	0.358
lc3q37	-0.081	-0.103	-0.248
lc3q38	0.105	0.170	-0.325
lc3q39	0.154	0.078	-0.166
lc3q40	-0.218	-0.074	0.227
lc3q41	0.275	0.126	-0.009
lc3q42	0.171	0.053	-0.262
lc3q43	0.003	-0.281	-0.300
lc3q44	-0.178	-0.743	-0.382
lc3q45	-0.246	-0.608	0.166
lc3q46	0.023	-0.347	-0.224
lc3q47	-0.369	-0.649	-0.189
lc3q48	-0.117	-0.299	0.081
lc3q49	-0.411	-1.155	-0.177
lc3q50	-0.529	-0.690	-0.031
lc3q51	-0.399	-0.618	-0.292

Table I.2 Year 3 G&P Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
lc3q26	-0.269	-0.212	-0.043	-0.014	-0.078	-0.232	-0.207	0.612
lc3q27	-0.186	-0.555	-0.071	0.051	-0.183	0.063	-0.15	0.545
lc3q28	-0.166	-0.21	0.077	0	-0.038	0.091	-0.167	0.282
lc3q29	-0.002	-0.099	-0.007	0.056	0.125	0.029	-0.012	-0.042
lc3q30	0.032	-0.163	-0.133	0.092	0.114	-0.212	-0.15	0.349
lc3q31	-0.146	0.235	0.048	-0.086	0.204	-0.062	-0.033	-0.098
lc3q32	-0.059	-0.408	0.157	0.123	-0.114	0.002	0.028	0.189
lc3q33	0.085	0.117	-0.068	-0.022	-0.223	-0.09	-0.053	0.324
lc3q34	-0.101	-0.105	-0.148	0.091	0.04	0.218	-0.036	0.092
lc3q35	-0.166	-0.047	-0.25	-0.106	0.058	0.24	0.153	0.203
lc3q36	-0.165	-0.206	0.392	0.345	-0.266	-0.208	-0.155	0.267
lc3q37	0.087	0.413	0.084	-0.208	-0.034	0.012	-0.106	-0.19
lc3q38	0.082	-0.271	0.147	-0.167	0.011	0.194	0.104	0.013
lc3q39	-0.178	0.059	0.073	-0.054	0.113	0.097	-0.024	-0.01
lc3q40	0.206	0.158	-0.07	0.102	-0.127	-0.082	-0.092	0.003
lc3q41	-0.346	-0.027	0.194	0.077	0.049	-0.04	0.047	0.15
lc3q42	-0.149	-0.063	-0.161	0.016	0.056	0.36	0.009	0.045
lc3q43	0.078	0.099	0.149	0.075	-0.198	-0.035	0.293	-0.389
lc3q44	0.196	0.272	-0.058	-0.002	-0.079	0.094	0.116	-0.524
lc3q45	0.217	0.117	0.012	0.083	-0.02	-0.248	0.146	-0.237
lc3q46	0.113	0.14	0.144	-0.149	0.054	0.019	-0.072	-0.2
lc3q47	0.261	0.111	-0.088	-0.214	0.142	-0.024	0.08	-0.235
lc3q48	0.145	0.14	0.014	0.006	0.172	-0.119	-0.193	-0.102
lc3q49	0.126	0.268	-0.274	-0.133	0.069	-0.002	0.282	-0.313
lc3q50	-0.023	0.221	-0.035	-0.059	0.145	0.074	0.133	-0.468
lc3q51	0.329	0.018	-0.084	0.097	0.006	-0.138	0.061	-0.265

Table I.3 Year 3 Numeracy Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
n3q01	-0.023	0.540	0.294
n3q02	0.056	0.764	0.322
n3q03	0.043	0.189	0.095
n3q04	0.292	0.244	-0.084
n3q05	0.365	0.129	-0.163
n3q06	0.216	0.406	-0.044
n3q07	0.345	-0.079	0.072
n3q08	0.229	0.629	0.186
n3q09	-0.154	0.687	0.251
n3q10	0.140	0.099	-0.062
n3q11	0.025	0.032	-0.108
n3q12	-0.097	0.229	0.316
n3q13	-0.151	0.021	0.171
n3q14	0.076	-0.176	-0.068
n3q15	-0.188	0.100	0.097
n3q16	-0.347	0.509	0.123
n3q17	0.314	0.265	0.027
n3q18	-0.124	-0.104	0.271
n3q19	0.081	0.193	-0.126
n3q20	-0.245	-0.201	-0.088
n3q21	0.238	-0.190	-0.041
n3q22	0.057	-0.816	-0.330
n3q23	0.187	-0.387	-0.251
n3q24	0.018	-0.370	-0.421
n3q25	0.154	-0.479	-0.072
n3q26	0.118	-0.650	0.479
n3q27	0.231	-1.071	0.181
n3q28	-1.061	0.524	-0.029
n3q29	0.272	-0.694	-0.289
n3q30	0.255	-0.960	0.088
n3q31	-0.171	-0.453	0.003
n3q32	-0.302	0.523	-0.556
n3q33	-0.301	-0.618	0.004
n3q34	-0.296	0.892	-0.111
n3q35	-0.248	0.272	-0.140

Table I.4 Year 3 Numeracy Item DIF:TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
n3q01	-0.299	-0.319	-0.714	0.334	0.028	-0.004	0.103	0.347
n3q02	-0.049	-0.637	-0.186	0.023	-0.146	0.078	0.162	0.399
n3q03	-0.076	-0.241	-0.05	-0.05	0.045	0.152	-0.084	0.153
n3q04	0.033	0.096	-0.141	0.053	0.098	0.044	-0.238	-0.023
n3q05	0.054	-0.136	0.145	0.097	0.1	-0.189	-0.13	-0.03
n3q06	-0.064	-0.375	-0.144	0.015	0.003	0.154	0.135	0.161
n3q07	0.154	0.098	-0.031	0.138	-0.145	-0.092	-0.014	-0.065
n3q08	0.089	-0.133	0.032	-0.06	-0.129	-0.318	-0.138	0.432
n3q09	-0.085	-0.105	0.165	-0.009	-0.145	-0.235	-0.238	0.469
n3q10	-0.076	-0.342	-0.121	0.116	0.074	0.118	0.109	0.067
n3q11	0.016	-0.022	-0.216	0.028	-0.09	0.184	0.138	-0.006
n3q12	-0.058	-0.151	0.057	0.009	-0.033	-0.087	0.009	0.282
n3q13	-0.169	0.151	-0.177	-0.214	0.194	0.246	0.101	-0.137
n3q14	0.082	0.273	0.071	-0.012	-0.206	-0.093	0.016	-0.089
n3q15	0.267	0.195	-0.081	-0.078	-0.181	0.028	0.002	-0.112
n3q16	0.024	-0.12	0.268	0.069	-0.178	-0.163	-0.052	0.227
n3q17	-0.007	-0.1	-0.016	-0.172	0.095	0.133	-0.132	0.263
n3q18	-0.087	-0.047	0.213	0.096	0.223	-0.084	-0.237	-0.1
n3q19	0.116	0.088	0.07	-0.001	-0.149	-0.114	-0.207	0.257
n3q20	0.015	0.14	0.184	-0.018	0.05	-0.209	0.015	-0.158
n3q21	-0.226	-0.073	0.256	-0.025	-0.092	0.134	0.212	-0.16
n3q22	0.147	0.066	0.037	-0.288	0.113	0.078	0.12	-0.288
n3q23	-0.122	0.133	-0.619	-0.049	0.383	0.456	0.026	-0.15
n3q24	0.385	-0.036	0.136	-0.088	0.081	-0.092	-0.048	-0.381
n3q25	-0.135	0.084	0.042	-0.118	0.1	0.12	0.125	-0.207
n3q26	0.06	0.335	-0.286	0.073	-0.197	0.056	0.187	-0.257
n3q27	0.407	0.348	0.006	-0.017	-0.123	-0.177	-0.038	-0.501
n3q28	-0.14	0.174	0.259	0.162	0.039	-0.35	-0.134	0.298
n3q29	0.146	0.108	0.147	-0.342	-0.018	0.26	-0.015	-0.312
n3q30	0.086	0.123	0.186	-0.288	-0.27	-0.051	0.231	0.06
n3q31	0.083	0.205	-0.155	0.07	-0.088	0.054	0.122	-0.314
n3q32	-0.227	-0.155	0.301	-0.121	0.194	0.145	0.009	0.25
n3q33	-0.017	0.456	-0.008	0.434	-0.044	-0.268	-0.05	-0.489
n3q34	0.038	-0.169	0.154	0.222	0.052	-0.178	-0.018	0.204
n3q35	-0.365	0.089	0.217	0.011	0.363	0.265	-0.049	-0.092

Table I.5 Year 3 Reading Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
r3q01	0.360	1.410	0.706
r3q02	0.291	0.886	0.150
r3q03	0.262	1.128	0.312
r3q04	0.064	0.773	0.290
r3q05	0.056	0.843	0.261
r3q06	-0.013	0.568	-0.041
r3q07	0.122	0.531	0.053
r3q08	0.248	0.626	-0.072
r3q09	-0.027	0.138	-0.141
r3q10	0.149	0.263	0.032
r3q11	0.060	0.093	-0.072
r3q12	-0.195	-0.591	0.057
r3q13	0.022	-0.350	-0.293
r3q14	-0.147	-0.652	-0.047
r3q15	-0.273	-0.248	-0.022
r3q16	0.043	0.160	-0.070
r3q17	-0.122	-0.282	0.152
r3q18	-0.282	-0.637	-0.116
r3q19	0.132	0.084	-0.170
r3q20	-0.077	-0.931	-0.280
r3q21	-0.009	0.178	0.042
r3q22	0.061	0.413	-0.077
r3q23	0.078	0.657	0.242
r3q24	-0.035	-0.077	-0.187
r3q25	-0.280	-0.307	0.074
r3q26	-0.462	-1.381	-0.247
r3q27	0.079	-0.490	-0.024
r3q28	0.157	-0.029	-0.081
r3q29	-0.237	-0.651	0.078
r3q30	-0.230	-1.023	-0.175
r3q31	0.046	0.502	-0.054
r3q32	0.144	-0.192	-0.280
r3q33	0.011	-0.481	-0.082
r3q34	0.148	0.267	-0.044
r3q35	-0.019	-0.341	0.148
r3q36	-0.128	-0.856	-0.021

Table I.6 Year 3 Reading Item DIF:TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
r3q01	-0.454	-0.098	-0.172	-0.007	-0.225	-0.294	-0.164	0.792
r3q02	-0.155	-0.058	-0.134	0.038	-0.073	-0.008	-0.261	0.439
r3q03	-0.394	-0.29	-0.106	0.049	0.058	0.061	-0.468	0.566
r3q04	-0.092	-0.148	0.121	-0.067	-0.109	0.038	-0.27	0.392
r3q05	-0.24	-0.265	-0.11	-0.135	-0.011	0.125	-0.209	0.543
r3q06	-0.155	0.008	-0.197	-0.115	0.209	0.232	-0.243	0.252
r3q07	-0.3	-0.141	0.056	-0.055	-0.01	0.117	-0.065	0.349
r3q08	0.001	-0.257	0.004	0.004	-0.306	0.181	0.079	0.298
r3q09	0.017	-0.001	0.009	-0.02	0.184	0.148	-0.103	-0.179
r3q10	-0.1	0.014	-0.024	0.131	0.023	-0.03	0.071	0.015
r3q11	0.117	-0.104	-0.007	0.15	-0.063	0.019	0.028	-0.048
r3q12	0.081	0.093	0.029	0.053	0.087	0.016	0.126	-0.447
r3q13	0.08	-0.124	-0.043	0.055	0.049	0.181	0.052	-0.162
r3q14	0.216	0.13	-0.091	-0.04	-0.12	-0.008	0.166	-0.184
r3q15	0.045	0.006	0.066	0.136	-0.08	0.061	0.013	-0.162
r3q16	-0.03	0.031	-0.032	0.02	0.143	0.123	-0.034	-0.147
r3q17	0.171	0.223	0.124	-0.075	-0.005	-0.432	-0.032	0.13
r3q18	0.224	0.084	0.07	0.004	-0.109	0.025	0.127	-0.391
r3q19	0.158	-0.279	0.189	0.043	0.093	-0.05	-0.152	-0.011
r3q20	0.015	0.276	0.083	-0.128	0.03	0.029	0.051	-0.336
r3q21	-0.007	0.152	0.16	0.108	-0.204	-0.084	-0.152	0.094
r3q22	0.099	-0.302	0.191	0.007	-0.157	-0.096	0.11	0.251
r3q23	-0.017	-0.208	0.097	-0.099	-0.269	0.033	-0.034	0.475
r3q24	0.066	-0.021	0.008	0.007	0.081	-0.093	-0.092	0.177
r3q25	0.003	0.108	-0.186	0.033	0.132	0.03	0.144	-0.176
r3q26	0.178	0.391	-0.336	-0.12	0.101	0.065	0.326	-0.673
r3q27	0.007	-0.04	-0.054	-0.085	0.121	0.06	0.126	-0.021
r3q28	0.08	0.019	0.065	0.078	0.035	-0.085	0.041	-0.156
r3q29	0.017	0.175	-0.148	-0.123	0.072	0.203	0.369	-0.599
r3q30	-0.063	0.135	0.068	0.066	0.267	-0.307	0.369	-0.5
r3q31	0.042	-0.18	0.166	0.068	0.077	0.073	-0.166	0.174
r3q32	0.141	0.108	0.032	0.08	0.076	-0.002	-0.112	-0.283
r3q33	-0.063	0.094	0.178	0.098	0.128	-0.041	-0.126	-0.201
r3q34	-0.001	0.061	0.009	0.038	-0.015	0.026	-0.107	0.171
r3q35	0.109	0.25	-0.055	0.025	-0.069	-0.225	0.223	-0.19
r3q36	0.206	0.158	-0.031	-0.219	-0.143	-0.091	0.372	-0.253

Table I.7 Year 3 Spelling Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
lc3q01	0.116	0.392	0.493
lc3q02	0.161	0.307	0.352
lc3q03	0.130	0.006	0.245
lc3q04	0.608	-0.061	-0.022
lc3q05	0.419	0.112	0.074
lc3q06	-0.157	0.367	0.124
lc3q07	0.337	-0.187	0.129
lc3q08	-0.192	0.042	-0.058
lc3q09	0.500	0.171	-0.022
lc3q10	0.152	-0.401	-0.136
lc3q11	0.253	0.000	-0.098
lc3q12	-0.117	0.141	-0.319
lc3q13	-0.286	0.075	0.219
lc3q14	-0.425	-0.026	0.137
lc3q15	0.155	0.163	0.066
lc3q16	-0.075	0.160	-0.070
lc3q17	-0.126	0.088	0.033
lc3q18	-0.133	0.023	-0.300
lc3q19	0.819	-0.409	0.410
lc3q20	0.093	-0.166	-0.149
lc3q21	-0.296	-0.449	-0.149
lc3q22	-0.416	-0.085	-0.181
lc3q23	-0.303	-0.235	-0.371
lc3q24	0.027	-0.820	-0.168
lc3q25	-1.245	0.793	-0.237

Table I.8 Year 3 Spelling Item DIF:TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
lc3q01	-0.202	-0.045	-0.09	0.015	-0.096	-0.082	-0.157	0.144
lc3q02	-0.233	-0.131	0.091	0.004	-0.308	-0.016	-0.13	0.267
lc3q03	-0.115	-0.216	0.203	0.186	-0.179	-0.247	-0.151	0.153
lc3q04	-0.461	0.153	-0.108	0.244	-0.173	0.28	-0.002	-0.069
lc3q05	-0.338	0.401	-0.496	-0.271	0.251	-0.004	0.383	0.09
lc3q06	-0.107	0.324	-0.061	-0.461	0.067	0.223	-0.015	0.035
lc3q07	0.176	-0.081	0.12	0.185	-0.409	-0.11	-0.064	0.206
lc3q08	-0.022	-0.086	0.042	-0.03	0.023	-0.056	0.195	-0.034
lc3q09	0.163	0.152	0.09	-0.115	-0.069	-0.019	-0.105	-0.082
lc3q10	0.342	-0.113	0.014	-0.337	-0.11	0.368	0.184	-0.398
lc3q11	-0.031	0.091	0.173	0.121	-0.224	0.074	-0.096	-0.051
lc3q12	0.19	-0.152	0.26	0.125	-0.145	-0.203	0.046	-0.003
lc3q13	-0.1	-0.177	0.365	0.064	0.313	-0.255	0.051	-0.106
lc3q14	0.143	-0.044	-0.096	-0.068	-0.075	0.128	0.162	-0.088
lc3q15	0.14	0.092	-0.023	-0.034	-0.164	-0.078	0.031	0.131
lc3q16	0.228	-0.087	-0.222	-0.034	0.086	0.202	-0.219	0.13
lc3q17	0.129	-0.222	0.188	0.216	-0.219	-0.071	-0.033	0.102
lc3q18	0.089	0.026	-0.121	-0.04	0.193	-0.065	-0.162	0.242
lc3q19	0.167	0.119	0.016	0.002	-0.035	-0.303	0.012	0.123
lc3q20	-0.033	-0.17	-0.014	0.056	0.145	-0.015	0.185	-0.049
lc3q21	0.092	0.118	-0.302	-0.032	0.35	0.004	0.045	-0.286
lc3q22	0.122	-0.175	0.079	-0.063	-0.075	0.155	-0.062	0.22
lc3q23	-0.284	0.232	0.096	-0.158	0.291	-0.242	0.026	0.331
lc3q24	-0.028	0.149	-0.262	0.043	0.214	0.325	0.023	-0.583
lc3q25	-0.024	-0.157	0.059	0.381	0.352	0.009	-0.145	-0.424

Table I.9 Year 5 G&P Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
lc5q26	0.194	1.564	0.678
lc5q27	0.052	0.554	0.274
lc5q28	0.041	0.202	0.141
lc5q29	0.055	-0.195	-0.001
lc5q30	0.243	1.300	0.586
lc5q31	0.043	0.082	-0.074
lc5q32	-0.196	0.345	0.306
lc5q33	0.243	0.522	0.409
lc5q34	-0.214	0.282	0.162
lc5q35	0.048	0.195	-0.189
lc5q36	0.132	0.522	-0.095
lc5q37	0.104	-0.386	-0.301
lc5q38	0.052	0.545	-0.052
lc5q39	0.306	0.070	0.319
lc5q40	-0.018	-0.088	0.412
lc5q41	0.088	-0.247	0.080
lc5q42	-0.054	-0.216	-0.325
lc5q43	-0.094	-0.585	-0.344
lc5q44	0.123	0.058	-0.466
lc5q45	-0.244	-0.243	-0.265
lc5q46	-0.106	-0.514	-0.219
lc5q47	-0.103	-0.908	-0.208
lc5q48	0.040	-0.541	-0.432
lc5q49	-0.478	-0.867	-0.255
lc5q50	0.106	-0.788	-0.110
lc5q51	-0.364	-0.662	-0.032

Table I.10 Year 5 G&P Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
lc5q26	-0.673	-0.53	-0.771	-0.089	-0.191	0.097	-0.525	0.796
lc5q27	-0.009	-0.25	-0.13	-0.021	-0.203	0.115	-0.008	0.373
lc5q28	0.048	0.15	-0.046	-0.035	-0.039	0.034	0.019	0.013
lc5q29	-0.065	-0.065	0.055	0.153	-0.104	-0.015	0.11	0.108
lc5q30	-0.418	-0.669	0.068	0.007	-0.088	0.151	-0.377	0.523
lc5q31	0.137	-0.075	0.114	0.172	-0.162	0.114	-0.219	-0.066
lc5q32	-0.068	0.158	0.188	-0.025	-0.117	-0.174	0.103	0.089
lc5q33	0.213	-0.301	0.087	0.126	-0.129	-0.015	-0.022	0.116
lc5q34	-0.073	0.157	-0.056	0.076	-0.149	-0.007	0.074	0.134
lc5q35	-0.201	-0.138	0.02	0.023	0.016	0.156	0.129	0.074
lc5q36	0.31	-0.267	-0.068	0.004	0.083	0.409	-0.437	-0.118
lc5q37	0.04	-0.009	-0.149	-0.016	0.25	0.081	0.276	-0.347
lc5q38	0.099	-0.233	0.265	0.018	0.009	0.101	-0.269	0.066
lc5q39	0.095	0.031	-0.109	0.118	-0.114	-0.062	0.131	0.112
lc5q40	0.262	0.118	0.195	0.112	0.014	-0.332	-0.104	-0.112
lc5q41	-0.062	0.141	-0.036	0.118	0.196	-0.078	-0.008	-0.125
lc5q42	-0.117	0.28	-0.022	-0.077	0.178	0.091	0.084	-0.315
lc5q43	0.131	0.061	0.15	0.061	-0.037	-0.198	0.188	-0.24
lc5q44	-0.17	0.027	0.021	-0.049	0.084	0.133	0.046	0.09
lc5q45	-0.078	0.12	0.089	-0.111	0.105	0.04	0.021	-0.017
lc5q46	0.055	-0.023	0.195	-0.022	0.108	-0.311	0.184	-0.013
lc5q47	0.119	0.136	-0.097	-0.122	0.143	-0.228	0.437	-0.293
lc5q48	0.163	0.064	-0.052	-0.263	0.085	0.106	-0.001	0.173
lc5q49	0.081	0.56	-0.077	-0.22	-0.087	0.086	0.203	-0.471
lc5q50	0.285	0.28	0.118	0.069	0.062	-0.431	-0.018	-0.275
lc5q51	-0.102	0.28	0.05	-0.007	0.089	0.14	-0.018	-0.276

Table I.11 Year 5 Numeracy Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
n5q01	0.006	0.547	0.465
n5q02	0.662	0.334	0.015
n5q03	-0.057	0.535	0.418
n5q04	0.080	0.480	0.258
n5q05	-0.200	0.218	0.253
n5q06	-0.222	0.737	0.198
n5q07	0.020	0.603	0.512
n5q08	-0.049	0.241	0.060
n5q09	0.027	0.113	-0.005
n5q10	-0.078	0.251	0.233
n5q11	-0.155	-0.245	-0.003
n5q12	-0.288	0.023	0.251
n5q13	-0.036	-0.167	0.020
n5q14	0.211	-0.299	0.281
n5q15	-0.069	0.036	0.180
n5q16	0.017	0.228	0.336
n5q17	-0.728	-0.490	-0.050
n5q18	0.303	-0.176	0.131
n5q19	0.053	-0.342	-0.285
n5q20	0.340	0.292	-0.516
n5q21	0.347	-0.166	-0.297
n5q22	0.123	-0.080	0.018
n5q23	-0.080	-0.033	0.072
n5q24	0.294	-0.710	-0.123
n5q25	-0.075	-0.780	-0.118
n5q26	0.068	0.790	0.015
n5q27	0.112	-0.113	0.061
n5q28	0.068	-0.286	-0.022
n5q29	-0.141	-0.494	-0.338
n5q30	0.241	-0.806	-0.067
n5q31	0.076	-0.671	-0.022
n5q32	-0.165	-0.519	-0.275
n5q33	-0.119	-0.589	-0.285
n5q34	0.155	0.672	-0.358
n5q35	-0.125	0.191	0.003
n5q36	-0.005	-0.388	-0.330
n5q37	0.133	0.101	-0.295
n5q38	-0.051	0.268	-0.320
n5q39	-0.540	0.021	-0.042
n5q40	-0.151	0.665	-0.029

Table I.12 Year 5 Numeracy Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
n5q01	0.077	-0.211	0.168	-0.179	-0.195	-0.194	-0.406	0.403
n5q02	-0.159	-0.089	-0.434	-0.158	0.095	0.193	0.155	0.141
n5q03	0.018	0.064	-0.055	-0.257	-0.047	-0.023	-0.105	0.287
n5q04	0.155	-0.279	0.202	-0.085	-0.112	0.016	-0.125	0.088
n5q05	0.108	0.11	0.032	-0.046	-0.026	-0.112	-0.059	-0.042
n5q06	-0.204	-0.092	0.082	0.031	0.008	-0.002	-0.221	0.255
n5q07	0.235	-0.214	-0.064	0.243	-0.128	-0.304	-0.122	0.249
n5q08	0.05	0.022	-0.172	0.248	0.066	0.222	-0.387	-0.214
n5q09	0.258	-0.145	0.084	0.167	-0.113	-0.031	-0.355	-0.004
n5q10	-0.027	-0.084	-0.053	0.049	0.114	-0.045	-0.057	0.052
n5q11	0.328	0.072	0.025	0.035	-0.051	-0.186	-0.146	-0.129
n5q12	0.108	0.039	-0.109	0.128	-0.226	-0.052	0.071	0.041
n5q13	0.114	0.262	0.003	-0.036	-0.094	0.042	-0.163	-0.195
n5q14	0.169	0.065	0.077	0.208	0.058	-0.255	-0.112	-0.294
n5q15	0.171	-0.09	-0.186	0.051	-0.21	0.091	0.122	0.036
n5q16	0.026	0.168	-0.095	-0.019	-0.002	-0.162	-0.038	0.131
n5q17	0.228	0.155	-0.091	-0.199	-0.015	0.021	0.153	-0.326
n5q18	-0.031	0.11	0.1	0.142	0.066	-0.22	-0.145	-0.051
n5q19	-0.021	-0.097	-0.129	-0.011	0.086	0.128	0.245	-0.27
n5q20	-0.173	-0.209	-0.441	0.05	0.081	0.392	0.203	0.13
n5q21	0.113	-0.017	-0.016	-0.194	0.082	0.093	0.055	-0.186
n5q22	-0.227	-0.048	0.289	-0.187	-0.017	0.293	0.054	-0.191
n5q23	0.072	0.133	-0.069	0.002	0.019	0.045	-0.208	0.003
n5q24	-0.214	-0.058	-0.122	0.073	0.082	-0.026	0.375	-0.144
n5q25	0.07	0.23	0.034	0.182	-0.013	-0.396	0.131	-0.312
n5q26	-0.029	-0.149	-0.066	-0.085	-0.043	0.238	0.054	0.096
n5q27	-0.071	0.043	-0.207	0.067	0.093	0.046	0.142	-0.144
n5q28	0.198	0.28	-0.173	0.016	-0.03	0.035	0.075	-0.537
n5q29	-0.004	-0.106	0.234	-0.02	-0.036	0.049	0.028	-0.218
n5q30	0.192	0.083	0.012	0.2	-0.205	-0.209	0.085	-0.227
n5q31	0.005	0.198	-0.078	0.096	-0.033	-0.144	0.075	-0.17
n5q32	0.122	0.063	0.299	0.036	-0.269	-0.093	0.039	-0.323
n5q33	-0.053	-0.073	0.169	0.048	-0.167	-0.077	0.378	-0.331
n5q34	-0.064	0.062	-0.422	-0.165	0.146	0.027	0.217	0.583
n5q35	-0.178	0.145	0.087	-0.069	0.024	0.166	-0.112	-0.004
n5q36	-0.207	-0.067	-0.008	-0.171	0.056	0.165	0.269	0.197
n5q37	-0.394	0.016	0.049	-0.106	0.512	0.395	-0.152	0.209
n5q38	-0.012	-0.129	0.238	-0.186	0.039	0.086	0.013	0.157
n5q39	-0.478	-0.095	0.365	0.084	0.112	0.058	0.072	0.671
n5q40	-0.268	-0.065	0.441	0.018	0.294	-0.268	-0.095	0.582

Table I.13 Year 5 Reading Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
r5q01	0.177	0.849	0.210
r5q02	0.232	0.224	-0.015
r5q03	0.359	0.714	-0.013
r5q04	-0.195	0.220	-0.114
r5q05	-0.056	0.176	-0.073
r5q06	-0.103	-0.358	0.065
r5q07	0.415	1.103	0.193
r5q08	0.148	-0.233	-0.150
r5q09	0.148	0.715	0.168
r5q10	0.197	0.929	0.416
r5q11	0.343	0.769	0.229
r5q12	0.124	0.276	-0.244
r5q13	-0.295	-0.133	0.233
r5q14	-0.182	-0.694	0.053
r5q15	0.220	-0.268	-0.266
r5q16	0.092	0.107	0.177
r5q17	0.055	-0.001	-0.217
r5q18	-0.107	0.109	0.311
r5q19	-0.048	-0.349	0.125
r5q20	0.111	-0.256	-0.131
r5q21	-0.137	-0.527	-0.183
r5q22	-0.065	-0.080	0.201
r5q23	0.151	-0.021	0.263
r5q24	0.081	-0.153	-0.200
r5q25	-0.078	0.698	-0.112
r5q26	-0.108	-0.513	-0.291
r5q27	-0.272	0.314	-0.192
r5q28	-0.379	-0.459	0.023
r5q29	-0.184	0.208	-0.052
r5q30	-0.143	-0.903	-0.061
r5q31	-0.259	-0.267	0.080
r5q32	0.119	-0.374	-0.119
r5q33	0.089	-0.665	-0.289
r5q34	-0.118	0.302	0.182
r5q35	-0.018	-0.540	0.054
r5q36	0.021	0.060	-0.001
r5q37	-0.339	-0.980	-0.258

Table I.14 Year 5 Reading Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
r5q01	-0.242	-0.338	-0.153	0.012	-0.06	0.103	-0.102	0.438
r5q02	0.168	-0.129	-0.042	0.043	0.128	0.114	-0.258	-0.067
r5q03	-0.332	-0.343	-0.177	-0.038	0.141	0.293	-0.116	0.291
r5q04	0.11	0.243	-0.017	-0.097	0.153	-0.047	-0.217	-0.112
r5q05	0.117	0.039	-0.584	-0.089	-0.158	0.15	0.238	0.212
r5q06	-0.012	0.242	-0.064	0.064	0.129	-0.097	0.078	-0.308
r5q07	-0.155	-0.673	0.255	0.007	-0.031	-0.099	-0.463	0.544
r5q08	0.018	-0.115	0.023	0.029	0.121	0.022	-0.033	0.045
r5q09	-0.005	-0.125	-0.082	-0.001	-0.093	0.061	-0.151	0.316
r5q10	-0.11	-0.108	-0.145	0.138	-0.083	0.029	-0.253	0.424
r5q11	0.009	-0.648	-0.027	0.025	-0.376	0.239	-0.047	0.441
r5q12	-0.018	-0.052	0.107	-0.073	0.075	0.091	-0.252	0.12
r5q13	-0.089	0.236	-0.046	-0.002	-0.025	-0.126	0.163	-0.009
r5q14	-0.061	0.118	-0.096	0.101	-0.057	0.248	0.081	-0.315
r5q15	0.077	-0.007	-0.229	0.034	0.139	-0.046	0.18	-0.064
r5q16	-0.003	-0.173	-0.061	0.084	0.078	-0.011	0.075	0.083
r5q17	0.086	0.067	-0.209	0.056	0.022	0.083	0.089	-0.131
r5q18	0.031	0.303	-0.227	0.062	0.001	0.054	-0.052	-0.109
r5q19	0.127	0.084	-0.116	0.183	-0.087	-0.215	0.026	0.095
r5q20	-0.039	0.091	0.092	0	0.039	-0.033	0.171	-0.299
r5q21	0.177	0.237	0.036	-0.076	-0.18	0.112	-0.133	-0.113
r5q22	-0.034	0.25	0.2	-0.051	-0.14	-0.168	0.084	-0.059
r5q23	-0.16	0.283	0.092	0.093	-0.119	-0.056	0.069	-0.143
r5q24	-0.006	0.248	-0.125	0.017	0.074	-0.005	0.051	-0.201
r5q25	-0.129	-0.109	0.071	-0.091	-0.138	0.299	-0.115	0.21
r5q26	0.099	0.052	-0.069	-0.003	0.198	0.001	0.106	-0.39
r5q27	0.039	-0.088	0.077	-0.014	0.001	0.052	-0.093	0.091
r5q28	0.384	-0.227	0.673	-0.5	0.043	-0.333	0.183	-0.025
r5q29	-0.169	0.198	0.161	0.148	0.006	-0.12	-0.039	-0.119
r5q30	-0.119	0.04	0.171	-0.018	-0.038	0.053	0.249	-0.336
r5q31	-0.145	0.239	0.148	0.121	0.065	-0.215	-0.036	-0.106
r5q32	-0.088	0.009	0.081	-0.082	-0.032	0.043	0.145	0.049
r5q33	0.09	-0.118	-0.02	-0.121	0.141	0.046	0.408	-0.434
r5q34	-0.031	-0.223	-0.075	0.336	-0.1	0.047	0.043	0.27
r5q35	0.301	0.169	0.114	-0.093	0.025	-0.315	0.058	-0.22
r5q36	-0.033	0.157	0.128	-0.154	0.024	0.006	-0.036	-0.012
r5q37	0.148	0.171	0.136	-0.051	0.115	-0.26	-0.103	-0.058

Table I.15 Year 5 Spelling Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
lc5q01	0.081	0.355	0.680
lc5q02	-0.179	0.009	0.056
lc5q03	0.519	-0.096	-0.080
lc5q04	0.346	-0.128	-0.066
lc5q05	0.618	-0.080	0.001
lc5q06	0.131	-0.257	-0.221
lc5q07	0.224	-0.046	-0.022
lc5q08	-0.236	-0.077	0.135
lc5q09	-0.129	-0.151	0.606
lc5q10	-0.150	-0.745	0.122
lc5q11	-0.140	-0.263	0.055
lc5q12	-0.228	0.491	-0.047
lc5q13	0.039	0.288	0.174
lc5q14	0.323	-0.125	-0.100
lc5q15	0.278	-0.090	-0.177
lc5q16	0.913	-0.311	0.298
lc5q17	-0.261	0.142	-0.141
lc5q18	0.010	-0.120	-0.106
lc5q19	-0.259	0.179	0.084
lc5q20	-0.044	-0.082	-0.216
lc5q21	0.072	0.208	-0.159
lc5q22	-0.728	0.465	-0.143
lc5q23	-0.243	0.061	-0.017
lc5q24	-0.410	0.268	-0.735
lc5q25	-0.549	0.100	0.019

Table I.16 Year 5 Spelling Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
lc5q01	-0.902	-0.095	-0.427	0.216	-0.104	-0.199	-0.634	0.488
lc5q02	-0.138	-0.265	-0.011	-0.106	0.088	0.43	-0.127	-0.102
lc5q03	0.185	-0.024	-0.072	-0.112	-0.097	-0.034	0.158	0.019
lc5q04	0.199	0.062	0.253	-0.131	-0.103	-0.262	0.045	-0.061
lc5q05	0.187	0.029	0.259	0.203	-0.108	-0.542	0.158	-0.187
lc5q06	0.298	0.047	-0.028	-0.12	0.026	-0.002	0.095	-0.329
lc5q07	0.326	0.094	-0.059	-0.024	0.028	-0.021	-0.113	-0.231
lc5q08	0.063	0.107	-0.295	-0.001	-0.025	0.055	0.04	0.178
lc5q09	-0.052	0.246	-0.066	0.082	0.128	-0.425	0.104	0.094
lc5q10	-0.121	0.105	-0.02	-0.145	0.175	0.323	0.164	-0.52
lc5q11	0.237	0.145	0.115	0.193	-0.446	-0.132	-0.001	-0.086
lc5q12	0.111	-0.067	0.29	-0.272	-0.052	0.099	0.04	-0.002
lc5q13	0.155	-0.267	0.144	0.115	-0.018	0.01	-0.344	0.12
lc5q14	0.155	-0.209	0.037	0.137	0.003	-0.103	0.021	-0.001
lc5q15	-0.035	-0.212	0.253	-0.012	0.05	-0.006	-0.011	0.008
lc5q16	-0.096	0.118	0.195	0.029	-0.031	-0.111	0.059	-0.148
lc5q17	-0.008	0.145	0.082	-0.104	-0.007	-0.034	0.007	-0.023
lc5q18	-0.07	0.117	0.046	-0.101	0.145	0.039	-0.14	0.064
lc5q19	-0.087	-0.166	0.043	0.039	-0.015	0.026	0.092	0.24
lc5q20	-0.067	-0.007	0.006	-0.337	0.161	0.433	0.021	-0.142
lc5q21	0.006	-0.034	-0.389	0.192	0.049	-0.083	0.272	0.19
lc5q22	-0.308	0.045	0.277	0.212	-0.276	0.126	0.07	0.011
lc5q23	-0.018	0.079	0.147	-0.066	-0.113	0.006	0.046	0.005
lc5q24	-0.142	0.134	-0.705	0.15	0.19	0.349	0.06	0.487
lc5q25	0.123	-0.125	-0.077	-0.039	0.349	0.056	-0.081	-0.073

Table I.17 Year 7 G&P Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
lc7q31	-0.170	0.605	0.891
lc7q32	0.231	1.280	0.730
lc7q33	0.040	1.034	0.654
lc7q34	0.302	0.807	0.397
lc7q35	0.265	0.577	0.546
lc7q36	0.342	-0.145	0.081
lc7q37	0.146	0.492	0.586
lc7q38	0.293	0.469	0.051
lc7q39	0.150	-0.215	-0.342
lc7q40	-0.057	0.004	-0.268
lc7q41	0.227	0.423	0.005
lc7q42	0.175	0.013	-0.145
lc7q43	-0.193	-0.170	-0.225
lc7q44	0.173	0.388	-0.309
lc7q45	0.041	-0.333	-0.069
lc7q46	-0.132	-0.486	-0.019
lc7q47	-0.207	0.009	-0.152
lc7q48	-0.095	0.028	-0.233
lc7q49	-0.076	-0.437	-0.235
lc7q50	-0.014	0.063	-0.237
lc7q51	-0.037	-0.285	0.196
lc7q52	-0.042	-0.355	-0.214
lc7q53	-0.320	-0.323	-0.413
lc7q54	-0.003	-0.290	0.012
lc7q55	-0.223	-0.607	-0.227
lc7q56	-0.041	-0.495	-0.274
lc7q57	-0.303	-0.836	-0.318
lc7q58	-0.472	-1.213	-0.470

Table I.18 Year 7 G&P Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
lc7q31	0.23	-0.213	0.109	-0.185	-0.262	-0.245	-0.241	0.421
lc7q32	0.115	-0.688	0.134	-0.042	-0.275	-0.113	-0.404	0.552
lc7q33	-0.198	-0.138	-0.274	0.085	0.084	-0.077	-0.142	0.427
lc7q34	0.016	-0.003	-0.076	-0.282	-0.358	0.12	-0.061	0.359
lc7q35	0.016	-0.261	0.079	0.134	0.023	-0.088	-0.22	0.251
lc7q36	0.049	0.049	0.025	-0.077	0.09	0.129	-0.204	-0.02
lc7q37	0.08	0.116	-0.153	0.116	-0.119	-0.124	-0.088	0.218
lc7q38	-0.178	-0.114	0.077	0.019	0.174	-0.022	-0.357	0.349
lc7q39	0.055	0.002	0.309	-0.043	-0.074	0.045	-0.007	-0.205
lc7q40	0.072	-0.096	0.007	0.137	0.049	0.104	-0.016	-0.171
lc7q41	0.078	-0.133	-0.02	-0.03	0.003	0.013	0.068	0.125
lc7q42	-0.048	0.046	0.064	0.036	-0.095	0.074	0.063	-0.03
lc7q43	-0.182	0.253	-0.149	-0.166	0.057	0.186	0.052	0.019
lc7q44	-0.05	0.004	-0.044	-0.114	-0.014	-0.024	0.075	0.264
lc7q45	0.209	0.044	-0.029	-0.105	0.072	0.07	-0.024	-0.151
lc7q46	-0.016	-0.025	0.128	0.218	0.027	-0.13	0.015	-0.126
lc7q47	-0.058	0.105	-0.071	-0.006	0.056	0.028	-0.035	0.121
lc7q48	-0.095	0.092	0.079	0.094	0.021	0.012	-0.013	-0.096
lc7q49	0.058	0.194	-0.144	-0.152	0.115	0.117	0.164	-0.291
lc7q50	0.058	-0.252	0.089	0.196	-0.119	0.045	0.2	-0.131
lc7q51	0.063	-0.006	0.076	-0.091	0.031	-0.046	0.023	0.096
lc7q52	-0.056	0.105	-0.149	-0.133	-0.018	0.163	0.321	-0.147
lc7q53	-0.391	0.095	-0.211	0.135	0.192	0.085	0.239	-0.019
lc7q54	0.229	0.097	0.034	-0.016	-0.03	-0.082	-0.05	-0.102
lc7q55	0.066	0.055	0.092	0.139	0.055	-0.078	-0.029	-0.267
lc7q56	0.026	0.164	0.247	0.044	-0.093	0.031	-0.114	-0.251
lc7q57	-0.001	0.431	-0.209	-0.058	0.077	0.053	0.334	-0.619
lc7q58	-0.149	0.073	-0.018	0.147	0.33	-0.246	0.448	-0.578

Table I.19 Year 7 Numeracy Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
n7CAq01	0.438	0.431	-0.207
n7CAq02	0.628	0.328	0.087
n7CAq03	0.527	0.119	0.276
n7CAq04	-0.099	-0.058	-0.020
n7CAq05	0.533	0.408	0.079
n7CAq06	0.242	-0.178	0.391
n7CAq07	0.268	-0.327	-0.144
n7CAq08	0.151	-0.171	0.040
n7CAq09	0.244	0.516	-0.362
n7CAq10	0.001	-0.138	0.227
n7CAq11	-0.131	-0.240	0.490
n7CAq12	0.141	0.092	-0.020
n7CAq13	0.132	0.159	0.162
n7CAq14	-0.289	-0.153	0.091
n7CAq15	0.008	-0.451	-0.046
n7CAq16	-0.066	-0.592	-0.051
n7CAq17	-0.053	-0.600	-0.069
n7CAq18	0.027	0.153	-0.088
n7CAq19	0.088	-0.767	0.016
n7CAq20	-0.015	-0.701	0.087
n7CAq21	-0.153	-0.184	0.149
n7CAq22	-0.019	-1.034	-0.507
n7CAq23	-0.517	-0.489	0.135
n7CAq24	0.151	0.469	0.077
n7CAq25	-0.062	0.281	-0.071
n7CAq26	-0.098	0.400	-0.420
n7CAq27	0.116	0.051	-0.111
n7CAq28	-0.190	0.438	0.132
n7CAq29	-0.154	0.197	-0.238
n7CAq30	-0.143	0.046	0.387
n7CAq31	-0.101	-0.239	-0.090
n7CAq32	0.018	0.455	-0.490

(continued)

Table I.19 (continued)

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
n7NCq01	0.172	0.607	0.475
n7NCq02	0.458	0.542	0.377
n7NCq03	-0.024	0.536	0.175
n7NCq04	0.065	0.580	0.181
n7NCq05	-0.368	0.848	0.270
n7NCq06	0.089	0.098	0.151
n7NCq07	-0.215	0.334	0.332
n7NCq08	-0.350	0.255	0.155
n7NCq09	0.303	-0.385	-0.303
n7NCq10	-0.230	0.251	0.139
n7NCq11	0.181	-0.014	-0.178
n7NCq12	0.210	-0.023	-0.105
n7NCq13	-0.296	-0.623	0.111
n7NCq14	0.254	-0.138	-0.194
n7NCq15	0.132	-0.319	-0.040
n7NCq16	-0.572	0.231	0.014
n7NCq17	-0.013	-0.090	-0.113
n7NCq18	0.024	0.182	-0.180
n7NCq19	-0.083	0.370	0.000
n7NCq20	-0.339	-0.689	0.103
n7NCq21	-0.084	0.068	0.056
n7NCq22	-0.126	-0.737	0.031
n7NCq23	-0.029	0.236	0.022
n7NCq24	0.217	0.233	-0.054
n7NCq25	0.168	-0.827	-0.484
n7NCq26	-0.094	-0.141	0.108
n7NCq27	-0.018	-0.087	-0.062
n7NCq28	-0.063	0.014	-0.151
n7NCq29	-0.371	-0.899	-0.106
n7NCq30	-0.092	0.238	-0.219
n7NCq31	-0.246	0.900	-0.293
n7NCq32	-0.283	0.224	-0.111

Table I.20 Year 7 Numeracy Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
n7CAq01	-0.099	-0.125	-0.299	-0.228	-0.058	0.193	0.123	0.297
n7CAq02	0.241	0.004	-0.145	-0.241	0.067	-0.067	0.141	-0.065
n7CAq03	0.152	-0.05	0.157	0.133	-0.044	-0.206	-0.103	-0.045
n7CAq04	-0.235	0.326	0.084	-0.155	-0.144	0.172	0.108	-0.224
n7CAq05	-0.02	-0.314	-0.107	0.014	0.037	0.147	0.001	0.13
n7CAq06	0.078	0.058	0.014	0.184	-0.174	-0.236	0.136	-0.049
n7CAq07	-0.413	0.108	-0.3	0.057	0.113	0.066	0.292	0.016
n7CAq08	0.121	-0.035	-0.03	0.023	0.01	-0.074	0.121	-0.14
n7CAq09	-0.404	-0.264	-0.341	-0.139	0.282	0.252	0.178	0.362
n7CAq10	0.006	0.019	0.155	0.016	0.21	-0.224	-0.125	-0.075
n7CAq11	0.227	-0.003	0.342	0.257	-0.185	-0.381	0.013	-0.274
n7CAq12	0.053	0.028	-0.146	0.107	-0.11	0.038	-0.074	0.088
n7CAq13	0.327	-0.241	-0.224	-0.099	-0.044	0.277	0.042	-0.046
n7CAq14	-0.042	0.11	-0.068	-0.027	0.019	0.127	-0.107	-0.046
n7CAq15	0.06	0.408	-0.714	-0.028	0.145	0.228	0.22	-0.368
n7CAq16	0.225	0.135	0.039	-0.054	0.084	-0.165	0.043	-0.341
n7CAq17	0.027	0.136	-0.065	0.034	0.118	-0.2	0.083	-0.155
n7CAq18	-0.089	0.135	-0.356	0.002	0.093	0.136	0.028	0.109
n7CAq19	0.303	0.101	0.227	-0.059	-0.158	-0.105	0.018	-0.384
n7CAq20	0.18	-0.03	0.113	0.215	-0.011	-0.286	-0.105	-0.087
n7CAq21	0.161	-0.015	0.177	0.001	-0.241	0.04	-0.066	-0.05
n7CAq22	-0.258	0.022	0.01	0.043	0.225	0.077	0.202	-0.394
n7CAq23	0.137	0.112	0.28	0.199	-0.11	-0.304	-0.124	-0.246
n7CAq24	0.104	0.191	0.208	-0.218	-0.193	-0.158	0.001	0.163
n7CAq25	0.058	0.058	0.021	-0.206	-0.058	0.027	0.058	0.122
n7CAq26	0.1	0.085	-0.129	-0.164	0.028	0.253	-0.042	-0.035
n7CAq27	-0.191	0.153	-0.126	0.044	0.13	0.089	0.018	-0.061
n7CAq28	-0.099	-0.025	0.167	0.244	-0.046	0.022	-0.13	-0.157
n7CAq29	-0.067	0.307	-0.034	-0.178	-0.139	-0.041	0.181	0.118
n7CAq30	0.347	-0.144	-0.08	0.325	-0.216	-0.277	-0.082	0.215
n7CAq31	-0.087	-0.192	0.184	0.064	0.143	0.069	-0.165	0.15
n7CAq32	-0.254	-0.122	0.251	-0.243	-0.118	0.127	0.446	0.424

(continued)

Table I.20 (continued)

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
n7NCq01	-0.133	-0.137	-0.449	0.1	-0.44	-0.019	0.1	0.402
n7NCq02	0.048	-0.057	-0.281	-0.169	-0.414	0.104	0.054	0.3
n7NCq03	0.03	-0.101	-0.021	-0.327	-0.024	0.204	-0.196	0.217
n7NCq04	-0.125	-0.23	0.11	0.061	-0.3	-0.029	-0.059	0.36
n7NCq05	0.203	-0.218	0.18	-0.018	-0.018	-0.1	-0.397	0.255
n7NCq06	-0.013	0.095	-0.033	0.203	0.069	-0.138	-0.171	-0.039
n7NCq07	0.038	-0.149	0.024	-0.076	-0.061	-0.055	0.016	0.222
n7NCq08	0.018	-0.184	-0.081	0.146	0.051	0.227	-0.351	0.11
n7NCq09	0.059	-0.057	-0.153	-0.001	0.049	-0.056	0.195	-0.046
n7NCq10	-0.329	0.308	-0.066	0.108	0.083	0.13	-0.144	-0.163
n7NCq11	-0.101	0.01	-0.111	-0.078	0.141	0.225	0.068	-0.217
n7NCq12	0.014	-0.098	0.196	0.072	0.064	-0.035	-0.138	-0.1
n7NCq13	0.019	0.01	0.164	0.177	0.135	-0.198	-0.183	-0.156
n7NCq14	0.023	-0.083	0.071	0.033	-0.021	-0.034	0.044	-0.038
n7NCq15	-0.077	0.088	0.135	0.189	0.082	-0.151	-0.159	-0.134
n7NCq16	-0.071	-0.113	-0.206	-0.011	0.228	0.207	0.008	-0.017
n7NCq17	-0.11	-0.245	0.222	0.036	-0.079	0.111	0.15	-0.103
n7NCq18	0.069	0.133	-0.592	-0.253	0.11	0.324	0.253	-0.015
n7NCq19	-0.091	-0.008	0.081	-0.022	0.118	-0.208	0.109	0.034
n7NCq20	0.012	0.027	0.252	0.212	0.029	-0.208	-0.038	-0.35
n7NCq21	0.237	-0.058	0.107	0.086	-0.144	-0.182	0.126	-0.186
n7NCq22	0.103	0.004	-0.123	0.133	0.244	-0.152	0.012	-0.267
n7NCq23	0.281	0.034	0.195	-0.096	-0.054	-0.05	-0.171	-0.156
n7NCq24	-0.292	0.178	-0.046	0.01	-0.16	0.444	-0.106	0.193
n7NCq25	0.081	-0.133	-0.028	0.007	0.163	0.247	-0.027	-0.347
n7NCq26	0.231	-0.078	0.13	0.005	-0.058	-0.094	-0.07	-0.066
n7NCq27	-0.162	0.217	0.017	0.041	0.129	-0.008	-0.013	-0.203
n7NCq28	-0.211	0.286	0.073	-0.252	0.063	0.218	-0.194	0.403
n7NCq29	-0.13	-0.006	0.256	0.184	-0.156	-0.116	0.056	-0.097
n7NCq30	-0.094	-0.255	-0.087	-0.173	0.133	0.282	0.083	0.453
n7NCq31	-0.022	-0.193	0.332	-0.122	0.196	-0.254	-0.066	0.549
n7NCq32	-0.146	0.082	0.471	-0.126	0.194	-0.246	-0.118	0.257

Table I.21 Year 7 Reading Item DIF: Gender, Indigenous, and LBOTE

Item Label	Gender Difference	Indigenous Difference	LBOTE Difference
r7q01	-0.208	0.239	0.239
r7q02	0.467	0.279	0.132
r7q03	0.106	0.976	0.038
r7q04	0.355	1.322	0.374
r7q05	0.421	1.148	0.252
r7q06	-0.311	-1.583	-0.624
r7q07	0.112	0.156	0.324
r7q08	0.313	-0.101	-0.137
r7q09	-0.005	-0.247	-0.312
r7q10	0.118	0.269	0.203
r7q11	0.297	0.202	0.245
r7q12	0.305	0.298	-0.035
r7q13	-0.013	1.041	-0.006
r7q14	-0.040	-0.105	-0.032
r7q15	-0.016	0.825	0.116
r7q16	-0.197	0.230	0.108
r7q17	-0.050	0.654	0.065
r7q18	-0.074	-0.228	-0.122
r7q19	-0.204	0.399	0.089
r7q20	0.261	0.376	-0.035
r7q21	0.444	0.231	-0.125
r7q22	0.197	-0.076	0.085
r7q23	0.165	0.310	0.187
r7q24	0.278	0.095	0.116
r7q25	-0.008	-0.285	0.251
r7q26	0.060	0.503	0.225
r7q27	0.118	0.090	0.134
r7q28	-0.382	-0.503	-0.104
r7q29	-0.397	0.328	0.264
r7q30	0.012	-0.563	-0.125
r7q31	-0.128	-0.383	0.147
r7q32	0.028	0.161	0.182
r7q33	-0.128	-0.572	-0.255
r7q34	0.241	-0.083	-0.328
r7q35	0.383	0.562	0.048
r7q36	-0.023	-0.558	-0.304
r7q37	0.019	-0.240	-0.107
r7q38	-0.009	-0.846	-0.210
r7q39	-0.108	-0.253	0.126
r7q40	-0.269	-0.370	-0.229
r7q41	-0.119	-0.967	-0.230
r7q42	-0.648	-0.191	-0.046
r7q43	0.196	0.108	-0.146
r7q44	-0.351	-0.435	-0.075
r7q45	-0.386	-0.304	0.124
r7q46	-0.196	-0.483	0.095
r7q47	0.043	0.220	-0.231
r7q48	-0.219	-0.336	-0.257
r7q49	-0.013	-0.457	-0.053
r7q50	-0.441	-0.850	-0.042

Table I.22 Year 7 Reading Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
r7q01	-0.163	-0.283	0.331	0.066	-0.307	-0.169	0.1	0.25
r7q02	-0.026	-0.134	0.028	-0.027	0.047	0.065	-0.142	0.174
r7q03	0.002	-0.246	-0.009	-0.104	-0.002	0.152	-0.282	0.286
r7q04	0.08	-0.223	-0.199	-0.199	-0.169	-0.063	-0.434	0.639
r7q05	0.129	-0.476	0.036	-0.25	0.006	-0.019	-0.336	0.503
r7q06	-0.044	0.078	-0.106	0.062	0.068	-0.027	0.482	-0.541
r7q07	0.088	0.073	-0.024	0.366	0.029	-0.313	-0.085	-0.12
r7q08	-0.137	0.061	0.061	-0.179	0.211	0.107	0.117	-0.189
r7q09	0.04	0.18	0.024	-0.108	0.06	-0.047	0.035	-0.136
r7q10	0.031	0.009	0.07	-0.057	-0.144	-0.101	0.087	0.18
r7q11	0.022	0.08	0.02	0.049	0.018	-0.238	-0.071	0.148
r7q12	0.005	-0.238	-0.2	-0.001	0.045	0.232	-0.007	0.161
r7q13	-0.221	-0.039	-0.28	-0.395	0.022	0.047	-0.184	0.649
r7q14	0.004	-0.089	0.06	0.019	-0.082	0.11	0.115	-0.074
r7q15	-0.107	0.015	-0.05	-0.109	0.11	0.09	-0.292	0.244
r7q16	0.091	-0.081	0.252	-0.261	-0.06	-0.112	0.151	0.123
r7q17	-0.203	-0.03	0.085	-0.041	-0.09	0.185	-0.208	0.314
r7q18	-0.017	0.089	0.03	0.042	-0.234	-0.057	0.343	-0.14
r7q19	-0.037	-0.033	0.17	-0.108	0.041	0.073	-0.2	0.119
r7q20	-0.166	-0.044	0.057	0.027	0.064	0.112	-0.087	0.107
r7q21	-0.085	-0.251	-0.134	0.003	0.245	0.139	0.051	0.074
r7q22	0.162	0.061	0.177	0.069	-0.003	-0.316	0.028	-0.122
r7q23	0.091	0.122	-0.125	-0.106	-0.005	0.209	-0.188	0.046
r7q24	0.201	-0.164	-0.037	0.069	-0.015	-0.097	0.032	0.075
r7q25	0.278	-0.005	0.065	0.007	-0.035	-0.102	-0.077	-0.08
r7q26	-0.043	-0.03	-0.164	-0.134	0.132	0.019	-0.034	0.267
r7q27	0.106	0.163	-0.216	0.093	0.007	0.11	-0.163	-0.016
r7q28	0.075	0.107	0.018	0.005	-0.186	-0.039	0.218	-0.172
r7q29	0.01	0.219	-0.036	-0.026	0.106	-0.156	-0.145	0.113
r7q30	-0.094	0.118	0.002	0.09	-0.006	-0.088	0.129	-0.098
r7q31	-0.192	0.154	-0.411	0.108	0.156	0.075	0.126	0.067
r7q32	0.178	0.117	0.118	-0.089	-0.242	-0.124	0.152	-0.037
r7q33	-0.113	0.087	0.189	-0.065	0.156	0.116	-0.042	-0.296
r7q34	-0.151	0.032	0.116	0.107	-0.096	0.046	-0.043	0.082
r7q35	-0.092	0.164	-0.074	0.12	-0.248	-0.078	0.083	0.174
r7q36	-0.006	0.117	0.083	0.06	-0.046	0.03	0.228	-0.478
r7q37	-0.087	-0.163	-0.091	0.144	-0.016	0.014	0.084	0.211
r7q38	-0.129	0.186	0.115	-0.108	-0.037	0.054	0.303	-0.375
r7q39	0.117	-0.071	0.149	0.2	-0.076	-0.225	0.185	-0.233
r7q40	0.07	0.013	0.021	-0.066	0.197	0.11	-0.058	-0.269
r7q41	0.129	0.18	-0.122	0.137	-0.165	0	0.202	-0.379
r7q42	-0.006	0.164	-0.03	-0.002	-0.003	0.129	-0.026	-0.19
r7q43	-0.051	0.032	-0.028	0.14	0.101	0.034	0.012	-0.204
r7q44	0.077	0.091	0.128	-0.027	-0.081	0.085	-0.044	-0.195
r7q45	-0.082	0.045	0.007	0.148	0.016	0.039	-0.127	0.04
r7q46	0.215	0.185	-0.078	0.13	-0.035	-0.15	-0.012	-0.246
r7q47	0.046	-0.24	0.118	-0.037	0.024	0.094	0.031	0.026
r7q48	-0.014	0.095	-0.009	-0.084	0.318	-0.027	-0.076	-0.144
r7q49	-0.081	-0.055	-0.003	0.104	0.14	-0.058	0.047	-0.029
r7q50	0.103	-0.14	-0.103	0.222	0.064	0.135	0.027	-0.308

Table I.23 Year 7 Spelling Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
lc7q01	0.460	-0.237	-0.160
lc7q02	0.396	0.252	0.188
lc7q03	0.532	0.365	-0.099
lc7q04	0.552	0.084	-0.037
lc7q05	0.376	0.235	-0.140
lc7q06	0.108	-0.025	0.212
lc7q07	0.099	-0.263	0.628
lc7q08	0.341	-0.095	-0.273
lc7q09	-0.016	-0.432	-0.098
lc7q10	0.241	0.180	0.061
lc7q11	0.355	-0.023	-0.006
lc7q12	-1.126	-0.344	0.552
lc7q13	-0.043	0.300	0.528
lc7q14	0.349	-0.378	0.370
lc7q15	-0.022	0.154	-0.244
lc7q16	-1.445	-0.438	-0.471
lc7q17	0.270	0.360	-0.116
lc7q18	0.253	0.453	0.009
lc7q19	-0.096	0.453	-0.162
lc7q20	-0.088	-0.225	-0.212
lc7q21	-0.131	-0.496	-0.177
lc7q22	0.185	0.085	0.186
lc7q23	-0.317	-0.200	-0.195
lc7q24	-0.166	0.163	-0.256
lc7q25	0.099	0.275	-0.215
lc7q26	0.112	0.001	-0.213
lc7q27	-0.037	-0.311	0.361
lc7q28	-0.651	-0.420	0.050
lc7q29	-0.252	0.403	-0.246
lc7q30	-0.340	0.125	0.173

Table I.24 Year 7 Spelling Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
lc7q01	0.272	-0.248	0.225	0.014	0.009	-0.096	0.104	-0.337
lc7q02	-0.202	-0.235	0.112	-0.07	-0.055	0.041	-0.081	0.28
lc7q03	0.187	-0.232	0.068	0.22	-0.207	0.014	-0.284	0.127
lc7q04	0.291	-0.092	0.384	-0.3	-0.396	0.095	-0.138	0.018
lc7q05	0.087	-0.398	0.164	0.211	-0.081	-0.018	-0.17	0.113
lc7q06	0.024	0.081	-0.073	0.027	0.006	-0.072	-0.075	0.112
lc7q07	0.107	0.156	-0.722	0.009	0.061	0.179	-0.007	0.151
lc7q08	-0.191	0.145	-0.08	0.009	0.202	-0.014	0.026	-0.123
lc7q09	-0.034	0.271	-0.171	-0.068	0.122	-0.004	0.182	-0.369
lc7q10	0.041	-0.112	0.23	0.107	-0.158	-0.086	0.064	-0.084
lc7q11	-0.057	0.077	-0.21	-0.031	-0.113	0.373	0.135	-0.144
lc7q12	0.199	0.221	0.21	0.09	-0.103	-0.284	-0.37	0.065
lc7q13	0.076	0.113	0.134	-0.154	0.097	-0.395	-0.081	0.37
lc7q14	0.262	0.076	0.002	-0.168	0.015	-0.092	-0.006	-0.104
lc7q15	-0.115	0.223	-0.118	-0.082	-0.216	-0.159	0.522	0.061
lc7q16	-0.011	0.07	0.197	0.105	0.022	0.188	-0.097	-0.542
lc7q17	-0.254	0.097	0.071	0.124	-0.252	0.018	-0.041	0.172
lc7q18	-0.223	0.167	-0.468	0.041	0.126	0.157	0.228	-0.038
lc7q19	-0.23	-0.167	-0.178	0.064	0.113	0.117	0.061	0.19
lc7q20	-0.056	-0.04	0.194	-0.056	0.176	-0.006	-0.061	-0.189
lc7q21	0.07	-0.069	-0.129	-0.155	0.147	0.045	0.131	-0.001
lc7q22	0.245	0.145	-0.086	-0.036	-0.062	-0.024	-0.261	0.14
lc7q23	0.041	-0.047	0.058	-0.067	-0.13	0.071	0.064	0.058
lc7q24	-0.025	-0.026	0.178	-0.1	-0.095	-0.073	0.148	0.054
lc7q25	-0.059	-0.111	0.117	0.006	0	-0.112	0.144	0.069
lc7q26	-0.09	-0.059	-0.067	-0.015	-0.075	0.249	0.075	0.074
lc7q27	0.101	0.052	-0.39	-0.022	0.199	-0.128	0.041	0.308
lc7q28	-0.189	-0.19	0.27	0.26	0.179	-0.062	-0.045	-0.236
lc7q29	-0.187	0.081	0.023	-0.031	0.177	0.06	-0.004	-0.028
lc7q30	-0.075	0.057	0.058	0.072	0.295	0.019	-0.2	-0.165

Table I.25 Year 9 G&P Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
lc9q31	0.194	0.900	0.972
lc9q32	0.432	0.133	-0.011
lc9q33	0.390	0.481	0.943
lc9q34	-0.184	0.466	0.585
lc9q35	0.158	0.433	0.039
lc9q36	-0.079	0.019	-0.260
lc9q37	-0.046	0.598	0.130
lc9q38	0.118	0.080	0.217
lc9q39	0.029	-0.347	-0.040
lc9q40	-0.172	0.084	0.210
lc9q41	0.217	-0.005	-0.232
lc9q42	0.249	0.653	-0.254
lc9q43	-0.167	-0.427	0.149
lc9q44	-0.119	-0.315	-0.487
lc9q45	0.028	0.034	0.051
lc9q46	-0.453	-0.022	0.179
lc9q47	0.080	0.219	-0.274
lc9q48	0.403	-0.031	-0.168
lc9q49	0.158	0.350	-0.112
lc9q50	-0.174	-0.673	-0.217
lc9q51	0.034	-0.496	-0.281
lc9q52	-0.021	0.297	0.175
lc9q53	-0.127	-0.370	-0.494
lc9q54	-0.222	-0.279	-0.309
lc9q55	-0.335	-0.537	-0.366
lc9q56	-0.258	-0.145	-0.096
lc9q57	-0.136	-0.687	0.007
lc9q58	0.000	-0.414	-0.056

Table I.26 Year 9 G&P Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
lc9q31	-0.282	-1.169	0.197	-0.252	-0.127	-0.225	0.278	0.573
lc9q32	-0.458	0.001	0.14	-0.318	0.262	-0.058	0.01	0.227
lc9q33	0.169	-0.072	-0.22	0.365	0.083	-0.43	-0.196	0.171
lc9q34	-0.011	-0.014	0.131	0.049	0.105	-0.195	-0.335	0.208
lc9q35	-0.335	-0.073	0.055	-0.196	0.13	0.186	-0.272	0.332
lc9q36	-0.144	-0.008	0.005	-0.055	0.228	-0.012	0.207	-0.121
lc9q37	0.148	-0.322	0.051	-0.107	-0.163	0.012	-0.029	0.335
lc9q38	0.055	0.145	0.105	-0.299	0.065	-0.082	-0.16	0.184
lc9q39	0.111	-0.094	0.015	0.117	-0.067	-0.046	0.01	0.052
lc9q40	-0.072	0.151	-0.028	0.004	-0.157	-0.056	0.078	0.205
lc9q41	0.405	-0.067	0.139	-0.015	-0.208	-0.138	-0.024	-0.06
lc9q42	0.158	-0.005	-0.017	-0.037	-0.038	0.41	-0.663	0.095
lc9q43	-0.003	-0.014	-0.126	0.372	-0.022	-0.073	0.041	-0.078
lc9q44	-0.055	0.08	0.033	0.199	-0.007	0.101	-0.004	-0.277
lc9q45	0.181	0.147	-0.062	0.073	-0.163	-0.054	0.138	-0.155
lc9q46	0.09	0.166	-0.005	-0.072	0.099	-0.112	-0.043	-0.013
lc9q47	-0.121	-0.045	0.09	-0.009	-0.125	0.257	-0.129	0.157
lc9q48	0.082	0.207	-0.279	0.051	0.101	0.045	-0.04	-0.093
lc9q49	-0.003	0.053	0.12	0.023	-0.077	0.104	-0.041	-0.088
lc9q50	-0.076	0.125	-0.001	0.055	0.028	-0.031	0.239	-0.268
lc9q51	0.041	0.025	-0.157	0.141	-0.149	-0.126	0.294	0.076
lc9q52	0.23	0.135	0.065	-0.046	-0.06	-0.003	-0.126	-0.116
lc9q53	-0.223	0.304	-0.122	-0.115	-0.046	0.33	0.107	-0.149
lc9q54	0.018	0.175	0.028	-0.115	0.158	-0.002	0.075	-0.271
lc9q55	-0.009	0.219	-0.157	0.05	-0.109	0.122	0.276	-0.347
lc9q56	0.107	-0.156	-0.023	0.022	-0.011	-0.046	0.233	0.008
lc9q57	-0.04	0.128	-0.015	0.019	0.118	0.024	0.069	-0.251
lc9q58	0.032	-0.027	0.039	0.095	0.149	0.095	0.006	-0.338

Table I.27 Year 9 Numeracy Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
n9CAq01	0.238	1.030	0.421
n9CAq02	0.047	0.652	0.392
n9CAq03	0.752	0.119	-0.291
n9CAq04	0.259	0.270	0.172
n9CAq05	0.675	-0.123	0.603
n9CAq06	-0.185	0.234	-0.007
n9CAq07	-0.306	0.281	0.146
n9CAq08	0.078	0.007	0.052
n9CAq09	0.147	-0.073	-0.270
n9CAq10	-0.234	0.192	-0.100
n9CAq11	-0.201	0.176	0.294
n9CAq12	-0.048	0.108	0.185
n9CAq13	0.042	0.075	0.174
n9CAq14	-0.165	-0.976	-0.145
n9CAq15	-0.154	-0.360	0.344
n9CAq16	0.180	-0.801	-0.085
n9CAq17	-0.476	0.103	0.243
n9CAq18	-0.183	-0.505	0.083
n9CAq19	-0.027	-0.221	-0.333
n9CAq20	-0.008	-0.648	0.269
n9CAq21	-0.217	-1.108	0.275
n9CAq22	0.140	0.755	-0.210
n9CAq23	0.275	-0.408	0.035
n9CAq24	-0.145	-0.349	0.033
n9CAq25	0.028	0.492	-0.103
n9CAq26	0.381	-0.312	-0.403
n9CAq27	0.120	0.624	-0.588
n9CAq28	-0.097	-1.014	0.346
n9CAq29	-0.212	0.530	-0.262
n9CAq30	-0.614	0.532	0.270
n9CAq31	-0.185	0.294	-0.598
n9CAq32	-0.104	0.158	-0.296

(continued)

Table I.27 (continued)

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
n9NCq01	-0.367	0.125	0.210
n9NCq02	0.147	0.374	0.194
n9NCq03	-0.193	0.775	0.184
n9NCq04	-0.066	0.632	0.407
n9NCq05	0.405	-0.006	-0.190
n9NCq06	0.360	-0.144	0.095
n9NCq07	-0.273	-0.313	0.081
n9NCq08	-0.011	0.141	-0.037
n9NCq09	0.402	-0.013	0.072
n9NCq10	-0.148	-0.098	0.186
n9NCq11	0.115	0.112	-0.398
n9NCq12	0.310	-0.193	-0.159
n9NCq13	0.054	-0.356	0.227
n9NCq14	-0.446	-0.476	0.050
n9NCq15	-0.003	-0.351	0.125
n9NCq16	0.210	-0.236	-0.167
n9NCq17	0.010	-0.323	0.068
n9NCq18	0.355	-0.116	-0.395
n9NCq19	0.213	0.482	-0.045
n9NCq20	-0.380	0.503	-0.162
n9NCq21	0.176	0.340	-0.146
n9NCq22	0.390	0.082	0.109
n9NCq23	0.287	0.291	-0.226
n9NCq24	0.230	0.207	-0.327
n9NCq25	-0.177	-0.278	0.194
n9NCq26	-0.240	-0.680	0.332
n9NCq27	-0.318	-0.389	-0.372
n9NCq28	-0.037	0.451	-0.436
n9NCq29	-0.058	-0.790	-0.230
n9NCq30	-0.420	-0.167	0.157
n9NCq31	-0.455	-0.126	0.162
n9NCq32	0.122	0.804	-0.209

Table I.28 Year 9 Numeracy Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
n9CAq01	0.242	-0.41	-0.218	0.063	-0.173	-0.241	-0.213	0.49
n9CAq02	0.143	-0.36	-0.056	-0.078	-0.07	0.016	-0.074	0.268
n9CAq03	-0.107	-0.029	-0.055	-0.135	0.055	-0.038	-0.05	0.276
n9CAq04	0.132	0.01	-0.054	-0.073	0.054	-0.004	-0.144	0.026
n9CAq05	0.086	-0.004	-0.112	-0.053	0.005	-0.119	0.139	0.056
n9CAq06	-0.042	-0.225	-0.048	0.066	0.194	0.247	-0.406	0.096
n9CAq07	-0.174	-0.248	0.051	-0.069	0.108	-0.109	0.102	0.289
n9CAq08	0.208	0.048	-0.164	-0.014	-0.028	-0.118	0.038	0.032
n9CAq09	-0.308	0.271	0.084	-0.171	-0.015	0.074	-0.12	0.179
n9CAq10	0.18	-0.104	0.096	-0.168	-0.005	0.011	-0.156	0.113
n9CAq11	0.076	0.118	-0.422	-0.135	0.071	0.107	0.063	0.103
n9CAq12	0.082	-0.088	-0.042	-0.12	0.04	-0.049	0.109	0.094
n9CAq13	0.101	0.016	0.194	0.078	-0.094	-0.137	-0.144	-0.022
n9CAq14	-0.197	-0.017	0.219	0.119	0.234	-0.121	0.095	-0.382
n9CAq15	0.074	0.004	-0.093	0.063	-0.043	-0.062	0.004	0.069
n9CAq16	0.089	0.134	0.108	0.076	-0.086	-0.219	0.251	-0.401
n9CAq17	0.001	-0.085	0.069	0.03	0.062	-0.111	0.084	-0.051
n9CAq18	-0.33	0.002	0.122	0.184	-0.008	-0.1	0.088	0.068
n9CAq19	-0.302	0.091	0.194	-0.129	0.131	0.315	-0.002	-0.303
n9CAq20	0.179	0.165	-0.059	-0.157	0.02	-0.137	0.172	-0.223
n9CAq21	-0.079	0.287	-0.055	0.228	0.093	-0.365	0.158	-0.316
n9CAq22	0.012	0.08	-0.212	-0.089	0.02	-0.102	0.077	0.317
n9CAq23	-0.188	0.082	0.253	-0.226	0.281	0.019	-0.149	-0.041
n9CAq24	0.189	0.057	-0.118	-0.053	-0.069	0.059	0.102	-0.178
n9CAq25	-0.06	0.013	0.03	0.012	-0.121	0.191	-0.179	0.177
n9CAq26	-0.424	0.153	-0.05	-0.153	0.14	0.156	0.28	-0.013
n9CAq27	-0.297	0.043	-0.253	0.091	0.169	0.617	0.138	-0.253
n9CAq28	0.14	0.062	-0.064	0.037	0.064	-0.088	0.179	-0.415
n9CAq29	-0.124	-0.013	0.211	-0.054	0.07	0.033	-0.149	0.143
n9CAq30	0.177	-0.03	0.229	0.175	-0.116	-0.544	0.023	0.185
n9CAq31	-0.293	-0.185	0.193	-0.072	0.114	0.697	0.036	-0.09
n9CAq32	-0.236	-0.112	0.216	0.247	0.161	0.393	-0.185	-0.22

(continued)

Table I.28 (continued)

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
n9NCq01	0.197	-0.052	0.084	0.097	0.079	-0.25	-0.173	0.002
n9NCq02	0.061	-0.296	0.228	-0.006	0.074	-0.083	-0.229	0.087
n9NCq03	0.19	-0.416	0.267	-0.132	-0.062	0.034	-0.507	0.294
n9NCq04	0.027	-0.499	0.294	0.098	-0.009	-0.218	-0.174	0.294
n9NCq05	0.115	0.126	-0.085	-0.205	-0.12	0.042	0.123	-0.008
n9NCq06	0.077	0.146	-0.324	-0.082	0.044	0.088	0.145	-0.138
n9NCq07	-0.049	0.187	0.067	0.181	-0.075	-0.015	0.027	-0.372
n9NCq08	0.081	0.139	-0.109	0.036	-0.09	0.061	-0.099	-0.053
n9NCq09	-0.041	0.016	0.132	0.134	-0.268	-0.243	0.011	0.271
n9NCq10	-0.056	-0.075	0.014	0.106	0.134	-0.056	-0.116	0.033
n9NCq11	0.127	-0.252	-0.033	-0.239	-0.074	0.331	0.356	-0.233
n9NCq12	0.329	0.068	0.067	-0.126	-0.176	-0.236	0.018	0.063
n9NCq13	-0.295	0.341	0.032	0.031	0.107	0.099	-0.216	-0.153
n9NCq14	0.056	0.054	-0.14	-0.025	0.018	-0.22	0.158	0.132
n9NCq15	0.146	0.2	-0.015	-0.105	-0.004	-0.244	0.045	-0.017
n9NCq16	-0.152	-0.023	-0.424	-0.057	0.154	0.233	0.276	-0.015
n9NCq17	0.201	0.146	-0.445	0.003	0.236	-0.21	0.281	-0.257
n9NCq18	-0.198	-0.083	0.207	0.06	-0.035	0.181	0.019	-0.141
n9NCq19	0.086	-0.075	0.05	-0.059	-0.259	0.07	0.001	0.363
n9NCq20	0.024	-0.141	0.127	0.027	-0.063	-0.089	-0.019	0.226
n9NCq21	-0.131	-0.039	0.055	0.046	-0.014	0.183	-0.077	-0.012
n9NCq22	-0.059	0.425	-0.333	0.032	-0.182	0.148	-0.073	0.119
n9NCq23	-0.011	-0.221	0.051	0.043	-0.054	0.024	0.095	0.14
n9NCq24	0.025	0.077	-0.311	-0.041	-0.09	0.153	0.072	0.229
n9NCq25	-0.063	0.03	0.065	0.08	-0.09	-0.035	-0.038	0.11
n9NCq26	0.092	0.26	0.101	0.032	-0.116	-0.334	0.269	-0.361
n9NCq27	-0.075	-0.001	0.152	0.186	-0.114	0.072	-0.079	-0.123
n9NCq28	0.006	0.108	0.101	-0.03	-0.051	0.251	-0.088	-0.237
n9NCq29	-0.015	0.233	-0.287	0.16	-0.128	0.129	0.035	-0.11
n9NCq30	0.152	0	0.214	0.079	0.127	-0.179	-0.199	-0.204
n9NCq31	0.119	0	0.113	-0.005	-0.095	0.108	-0.059	-0.153
n9NCq32	0.08	-0.108	-0.105	0.163	-0.061	-0.069	0.048	0.148

Table I.29 Year 9 Reading Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
r9q01	0.461	1.098	0.339
r9q02	-0.403	-0.672	0.159
r9q03	0.146	0.378	0.049
r9q04	0.243	0.126	0.126
r9q05	0.303	0.058	0.039
r9q06	0.042	0.327	0.127
r9q07	-0.102	0.183	0.274
r9q08	-0.222	-0.031	-0.227
r9q09	0.100	-0.167	-0.125
r9q10	0.158	0.649	-0.112
r9q11	0.069	-0.589	-0.069
r9q12	0.173	0.048	0.031
r9q13	-0.284	0.121	-0.102
r9q14	-0.161	0.455	0.005
r9q15	-0.184	0.531	0.094
r9q16	0.097	0.906	0.022
r9q17	-0.077	-0.132	-0.058
r9q18	-0.019	0.262	-0.202
r9q19	-0.081	-0.244	-0.184
r9q20	-0.513	0.017	0.142
r9q21	-0.324	0.035	-0.110
r9q22	-0.381	-0.270	-0.018
r9q23	-0.827	-0.031	-0.104
r9q24	0.200	0.241	-0.046
r9q25	-0.135	0.031	0.052
r9q26	0.344	0.225	0.321
r9q27	0.097	-0.083	-0.121
r9q28	0.351	0.335	0.052
r9q29	-0.261	-0.351	-0.342
r9q30	0.008	-1.317	-0.459
r9q31	0.319	-0.136	0.138
r9q32	-0.228	-0.637	0.071
r9q33	0.479	0.291	-0.047
r9q34	0.286	-0.160	-0.001
r9q35	0.247	-0.141	-0.089
r9q36	0.413	0.350	0.174
r9q37	0.159	0.150	-0.142
r9q38	-0.398	-0.408	-0.172
r9q39	-0.325	0.138	0.019
r9q40	-0.080	-0.003	-0.183
r9q41	-0.160	-0.029	0.234
r9q42	-0.084	-0.424	-0.222
r9q43	-0.259	-0.229	0.452
r9q44	-0.003	-0.108	0.101
r9q45	0.016	-0.511	0.044
r9q46	0.329	0.348	0.098
r9q47	0.028	-0.476	0.035
r9q48	0.054	-0.095	-0.029
r9q49	0.386	-0.057	-0.038

Table I.30 Year 9 Reading Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
r9q01	0.153	-0.172	-0.077	-0.431	-0.143	-0.16	-0.517	0.588
r9q02	0.007	0.147	0.1	0.209	-0.21	-0.058	-0.027	-0.122
r9q03	-0.188	0.036	0.129	-0.098	-0.132	0.099	-0.097	0.23
r9q04	0.077	-0.206	0.045	0.14	-0.053	-0.123	-0.089	0.169
r9q05	0.156	0.098	0.133	-0.152	-0.015	-0.21	-0.112	0.094
r9q06	0.277	-0.441	0.089	-0.076	0.211	-0.292	-0.146	0.137
r9q07	0.157	-0.122	0.154	-0.137	0.077	-0.242	0.172	-0.059
r9q08	0.144	-0.068	0.1	0.11	0.25	-0.018	-0.116	-0.409
r9q09	-0.074	0.029	-0.113	0.202	0.038	-0.148	0.033	0.084
r9q10	-0.169	-0.288	0.138	0.218	0.097	-0.007	-0.281	0.117
r9q11	-0.053	-0.011	-0.008	0.117	0.065	0.088	0.097	-0.277
r9q12	-0.047	-0.043	-0.185	0.126	-0.037	0.106	0.137	-0.005
r9q13	0.007	-0.054	-0.04	-0.055	0.04	0.126	0.005	0.039
r9q14	-0.07	-0.196	-0.008	0.104	-0.011	0.076	-0.069	0.193
r9q15	0.042	-0.057	-0.125	0.003	-0.074	0.165	-0.183	0.224
r9q16	-0.164	-0.47	0.206	0.048	-0.174	-0.078	-0.072	0.445
r9q17	0.107	-0.027	0.134	-0.18	0.043	0.035	0.019	-0.091
r9q18	0.036	-0.011	-0.184	0.105	-0.098	0.175	0.063	-0.038
r9q19	-0.1	-0.012	-0.01	0.136	0.055	0.078	-0.008	-0.09
r9q20	0.116	-0.055	0.081	0.134	-0.013	-0.152	-0.04	-0.036
r9q21	-0.1	-0.039	-0.062	0	0.251	-0.038	0.024	0.021
r9q22	0.093	0.191	-0.014	0.082	-0.004	0.009	-0.112	-0.236
r9q23	-0.03	0.109	0.07	0.037	-0.088	-0.027	0.057	-0.079
r9q24	0.057	-0.138	0.039	0.072	0.107	-0.032	-0.024	-0.054
r9q25	0.282	0.119	-0.018	0.028	-0.039	-0.201	-0.066	-0.053
r9q26	0.076	-0.067	0.128	-0.367	0.125	-0.382	0.109	0.299
r9q27	-0.115	0.015	-0.033	0.029	0.016	0.056	0.039	0.054
r9q28	-0.086	-0.171	0.294	0.15	-0.342	0.07	-0.226	0.211
r9q29	-0.134	0.043	0.099	-0.056	-0.056	0.156	0.152	-0.166
r9q30	-0.476	0.272	-0.114	0.047	0.291	0.245	0.044	-0.242
r9q31	-0.061	0.103	-0.026	-0.162	-0.03	0.001	0.23	0.017
r9q32	0.178	-0.048	-0.022	0.017	0.016	0.13	-0.09	-0.146
r9q33	0.01	0.014	-0.084	0.015	0.102	0.101	-0.109	-0.017
r9q34	0.014	0.298	0.002	-0.039	-0.108	0.001	0.129	-0.285
r9q35	-0.041	0.012	-0.042	0.035	-0.105	0.049	0.11	0.051
r9q36	0.09	-0.06	0.105	-0.134	-0.088	-0.196	0.112	0.213
r9q37	-0.131	-0.035	-0.064	-0.08	0.029	0.226	0.053	0.054
r9q38	-0.155	0.12	-0.065	0.117	0.04	0.01	0.052	-0.083
r9q39	-0.139	-0.029	0.04	0.02	-0.114	0.109	-0.137	0.264
r9q40	0.079	0.052	0.089	-0.011	-0.079	0.031	-0.074	-0.047
r9q41	-0.119	0.257	-0.071	-0.051	0.119	-0.066	-0.113	0.072
r9q42	0.003	0.03	0.034	-0.034	0.045	0.112	0.109	-0.29
r9q43	0.151	0.072	0.028	0.006	-0.217	-0.046	0.076	-0.017
r9q44	0.158	-0.035	-0.1	-0.024	-0.062	0.018	0.054	0.054
r9q45	-0.104	0.42	-0.275	-0.003	0.064	-0.061	0.27	-0.313
r9q46	0.107	0.243	-0.413	-0.346	0.04	0.563	0.347	-0.326
r9q47	0.033	0.167	0.087	0.119	0.031	-0.323	0.058	-0.13
r9q48	-0.094	0.021	-0.099	0.046	0.053	0.022	0.125	-0.018
r9q49	0.041	-0.016	-0.069	-0.032	0.088	0.003	0.031	-0.004

Table I.31 Year 9 Spelling Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
lc9q01	0.819	0.086	-0.144
lc9q02	0.118	0.092	-0.298
lc9q03	-0.322	-0.017	0.091
lc9q04	0.013	-0.210	1.010
lc9q05	0.207	-0.405	0.212
lc9q06	-0.403	-0.158	-0.207
lc9q07	-0.054	-0.037	-0.095
lc9q08	0.042	0.129	-0.261
lc9q09	-1.189	0.162	0.512
lc9q10	0.098	0.038	0.447
lc9q11	0.583	-0.115	-0.002
lc9q12	-0.766	-0.334	-0.338
lc9q13	0.180	0.096	0.240
lc9q14	-0.316	0.113	-0.239
lc9q15	-0.129	0.349	0.436
lc9q16	-0.143	-0.039	-0.324
lc9q17	0.197	-0.086	0.236
lc9q18	0.324	0.203	-0.123
lc9q19	0.503	-0.296	-0.101
lc9q20	0.014	-0.295	-0.296
lc9q21	-0.238	-0.073	0.151
lc9q22	0.112	-0.201	0.000
lc9q23	0.031	-0.262	0.081
lc9q24	-0.128	0.200	-0.354
lc9q25	0.214	0.613	-0.133
lc9q26	0.037	0.826	-0.315
lc9q27	-0.123	0.008	-0.273
lc9q28	-0.064	0.005	0.114
lc9q29	-0.102	-0.445	0.182
lc9q30	0.486	0.053	-0.208

Table I.32 Year 9 Spelling Item DIF: TAA

Item_Label	NSW	VIC	QLD	WA	SA	TAS	ACT	NT
lc9q01	-0.004	0.071	0.185	-0.265	0.062	-0.027	-0.197	-0.043
lc9q02	-0.057	0.04	0.011	0.004	-0.138	0.189	0.131	-0.33
lc9q03	0.039	-0.248	0.438	-0.049	-0.056	-0.185	0.088	-0.153
lc9q04	0.031	0.372	-0.658	-0.145	-0.026	0.251	0.101	-0.068
lc9q05	0.084	0.008	-0.079	0.111	0.052	-0.378	0.252	-0.062
lc9q06	-0.23	0.272	-0.154	0.13	-0.132	0.221	0.192	-0.393
lc9q07	0.01	0.241	0.029	-0.11	-0.102	-0.146	0.159	-0.1
lc9q08	-0.346	0.148	-0.155	0.05	0.211	0.4	-0.168	-0.116
lc9q09	0.159	0.079	0.17	0.091	-0.073	-0.086	-0.279	-0.047
lc9q10	0.231	0.092	0.052	0.064	0.083	-0.365	-0.146	0.001
lc9q11	0.083	0.151	-0.033	0.174	-0.119	-0.104	-0.06	-0.115
lc9q12	-0.115	-0.175	0.102	-0.012	-0.041	0.173	0.155	-0.038
lc9q13	0.633	-0.323	0.059	-0.068	0.003	-0.032	-0.115	-0.114
lc9q14	0.142	-0.088	0.188	-0.028	-0.194	0.039	0.199	-0.231
lc9q15	0.067	0.183	-0.253	-0.076	0.026	0.087	-0.16	0.244
lc9q16	-0.038	-0.117	-0.243	0.029	0.099	0.097	0.2	0.069
lc9q17	-0.336	-0.106	0.271	0.029	-0.086	-0.098	-0.232	0.257
lc9q18	-0.088	-0.419	0.023	-0.081	0.217	0.126	-0.045	0.078
lc9q19	-0.148	0.072	0.236	0.179	-0.052	-0.231	-0.044	-0.054
lc9q20	0.03	-0.023	0.049	-0.285	0.118	0.101	0.057	-0.066
lc9q21	-0.393	0.004	-0.292	0.539	0.02	-0.048	-0.006	0.174
lc9q22	-0.074	-0.116	-0.102	0.125	-0.076	0.138	0.092	-0.021
lc9q23	0.226	0.166	-0.506	-0.057	-0.055	-0.044	0.103	0.241
lc9q24	0.142	-0.212	0.224	-0.092	-0.02	-0.075	0.091	-0.034
lc9q25	-0.094	-0.064	0.116	0.234	-0.134	-0.162	-0.05	0.329
lc9q26	-0.019	-0.286	0.17	-0.393	0.211	0.12	0.103	0.42
lc9q27	0.048	0.035	-0.048	-0.195	0.083	0.17	-0.112	0.134
lc9q28	0.028	-0.009	0.375	-0.113	-0.055	-0.082	-0.167	0.205
lc9q29	0.001	0.341	-0.042	-0.006	0.154	-0.195	-0.291	0.094
lc9q30	-0.012	-0.086	-0.13	0.219	0.019	0.146	0.15	-0.256

Table I.33 Years 3, 5, 7, and 9 Writing Item DIF: Gender, Indigenous, and LBOTE

Item_Label	Gender_Difference	Indigenous_Difference	LBOTE_Difference
WQ01	0.209	-0.507	-0.191
WQ02	0.137	0.046	0.04
WQ03	-0.04	-0.046	0.238
WQ04	0.064	-0.108	0.096
WQ05	-0.309	0.041	0.004
WQ06	-0.001	-0.092	0.065
WQ07	0.007	0.206	-0.035
WQ08	-0.119	0.158	0.293
WQ09	0.226	0.305	-0.282
WQ10	-0.174	-0.005	-0.227

APPENDIX J. EXPECTED SCORE CURVES OF WRITING CRITERIA

FIGURE J.1 Criterion 1: Audience

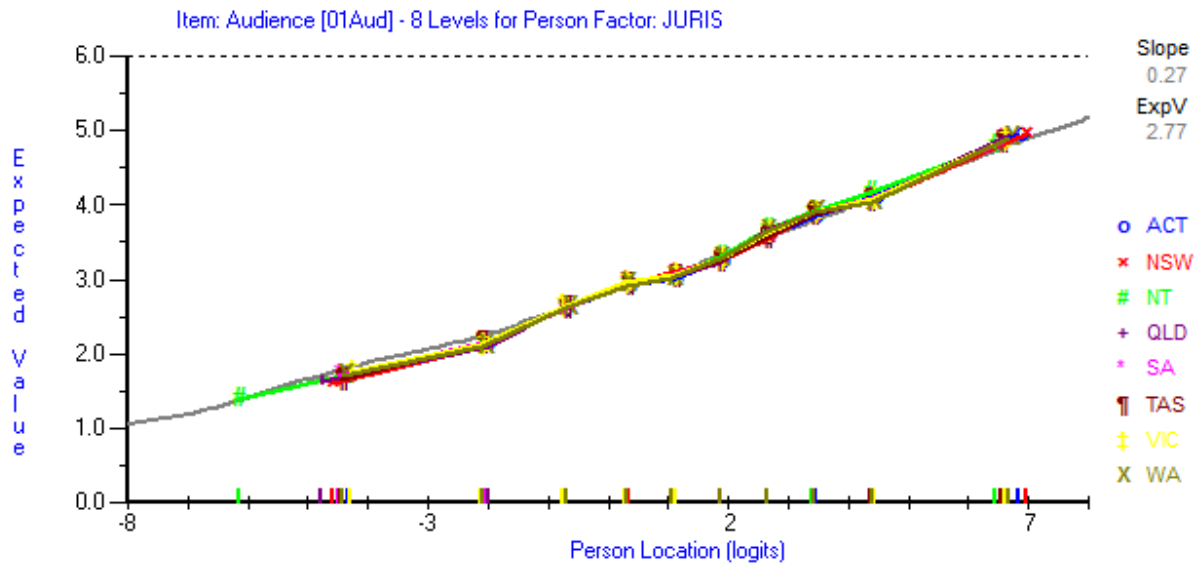


FIGURE J.2 Criterion 2: Text Structure

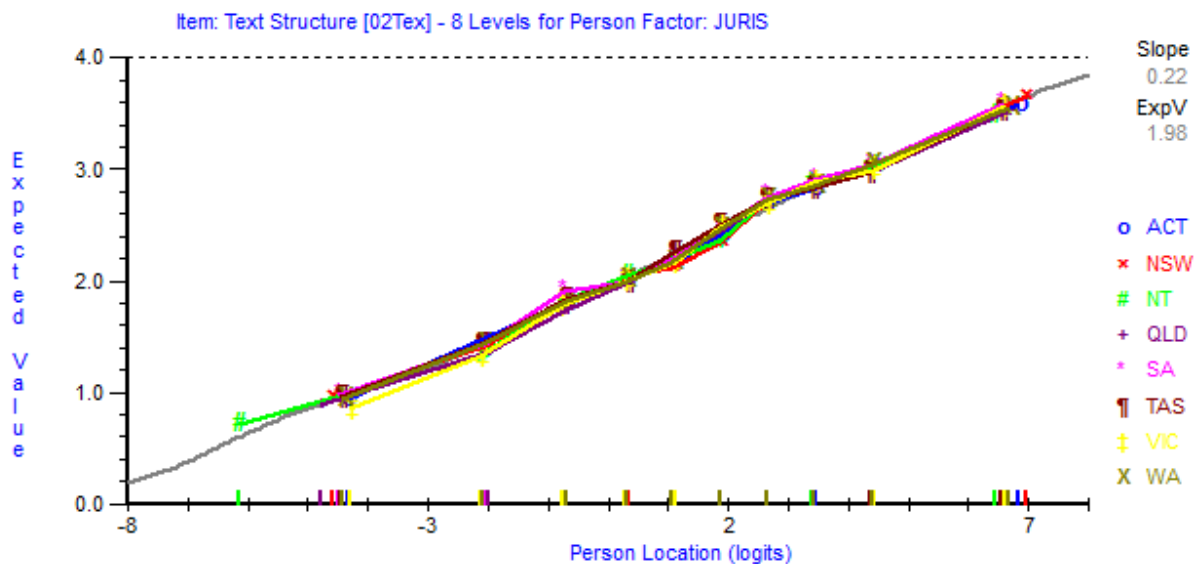


FIGURE J.3 Criterion 3: Ideas



FIGURE J.4 Criterion 4: Persuasive Devices

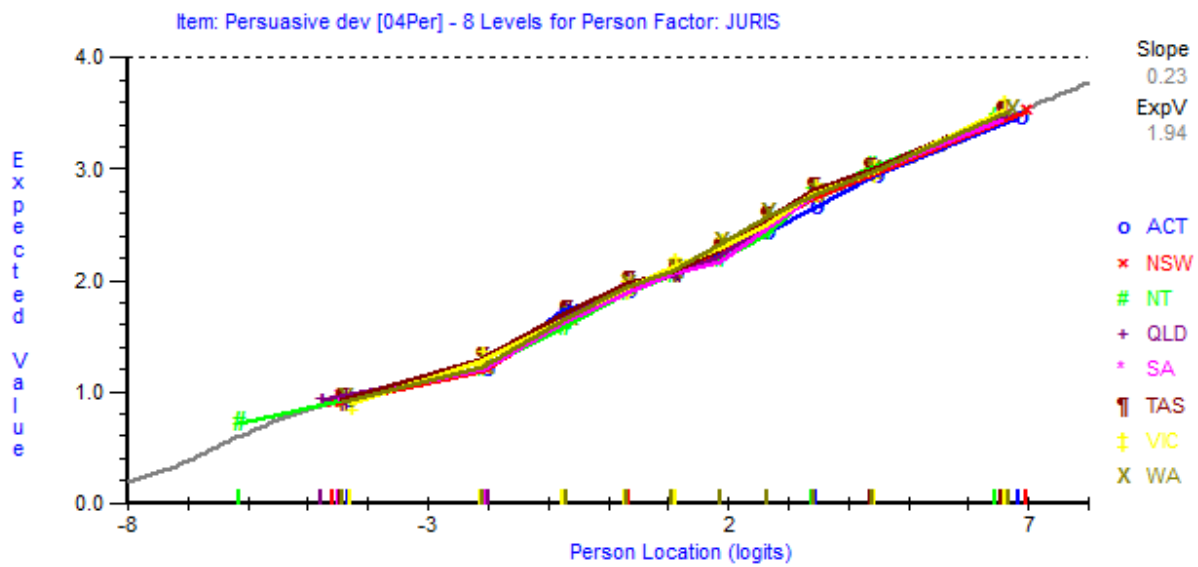


FIGURE J.5 Criterion 5: Vocabulary

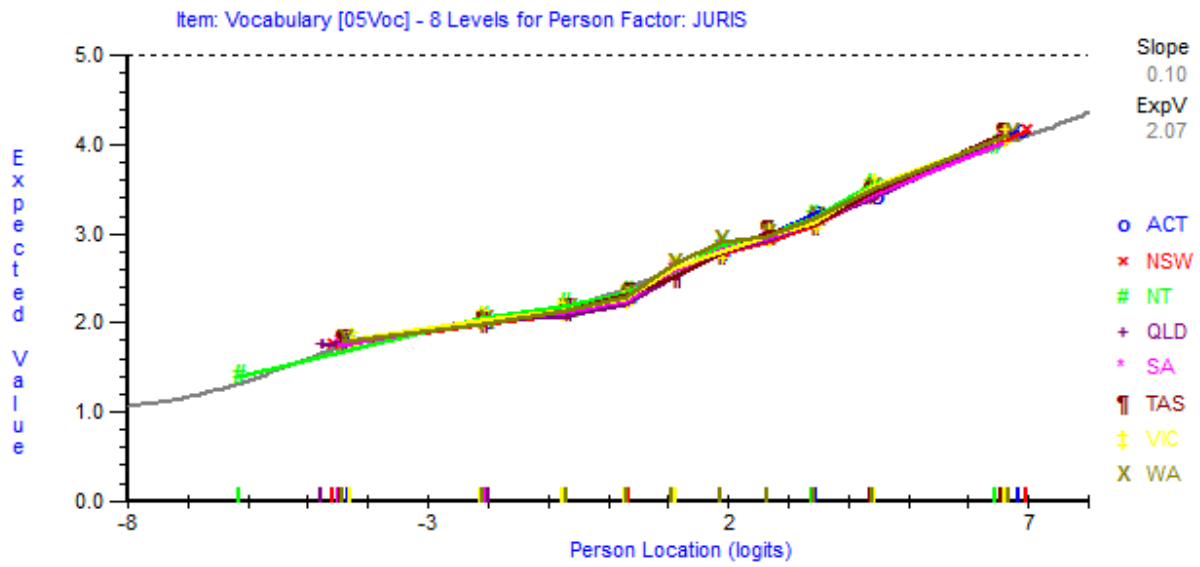


FIGURE J.6 Criterion 6: Cohesion

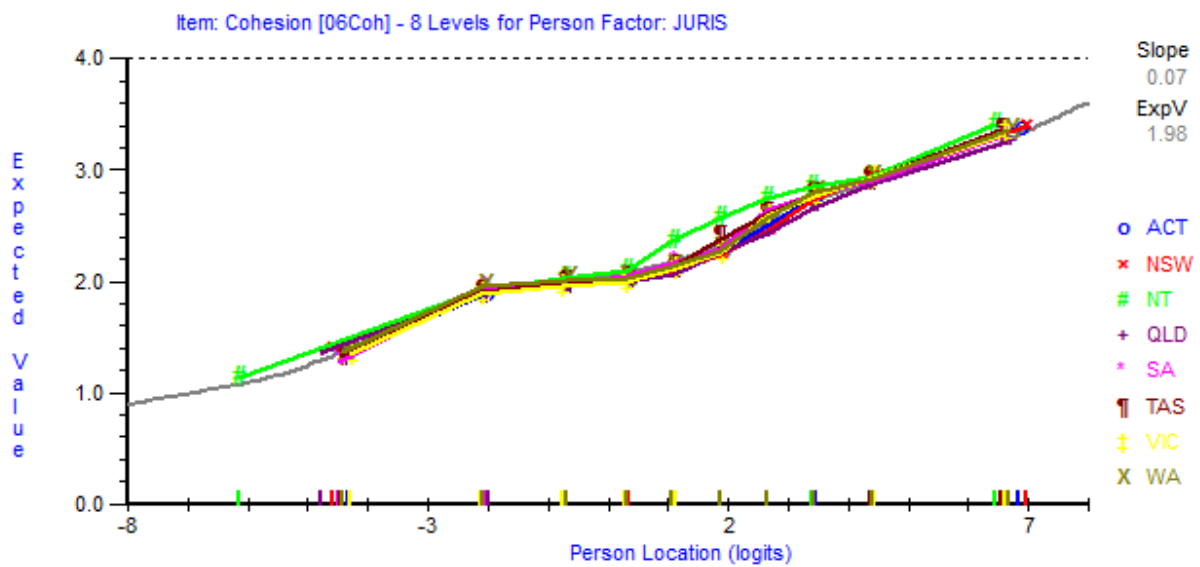


FIGURE J.7 Criterion 7: Paragraphing

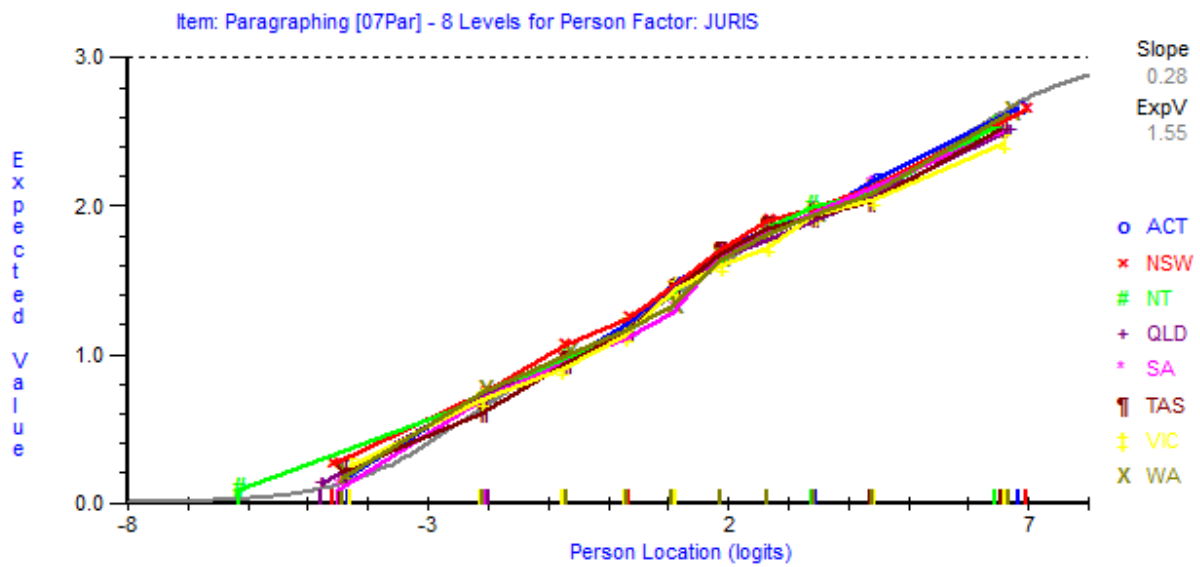


FIGURE J.8 Criterion 8: Sentence Structure



FIGURE J.9 Criterion 9: Punctuation

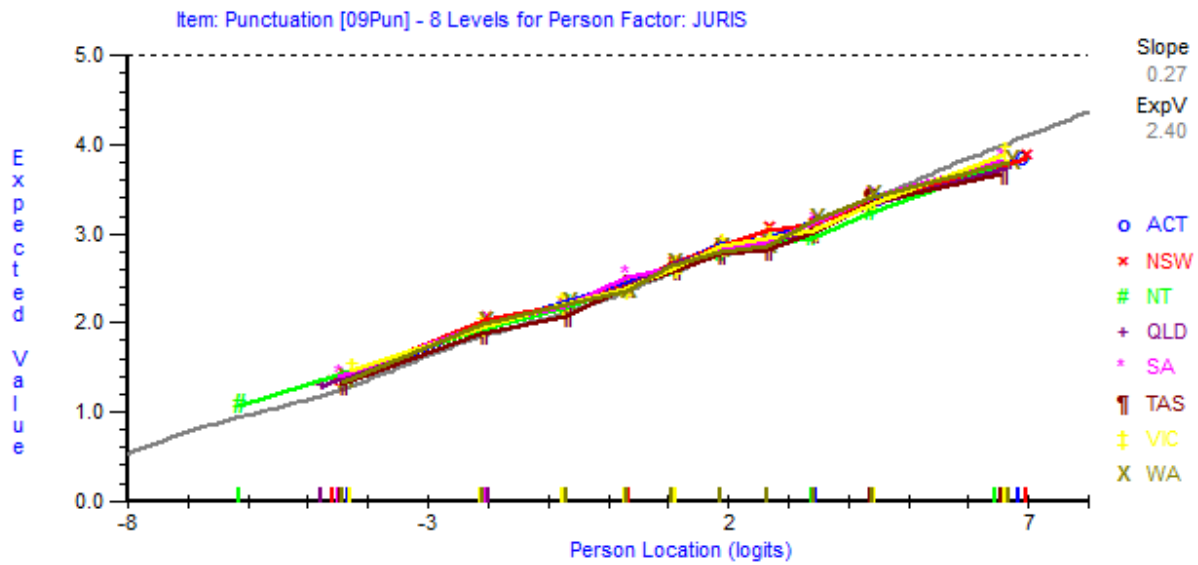
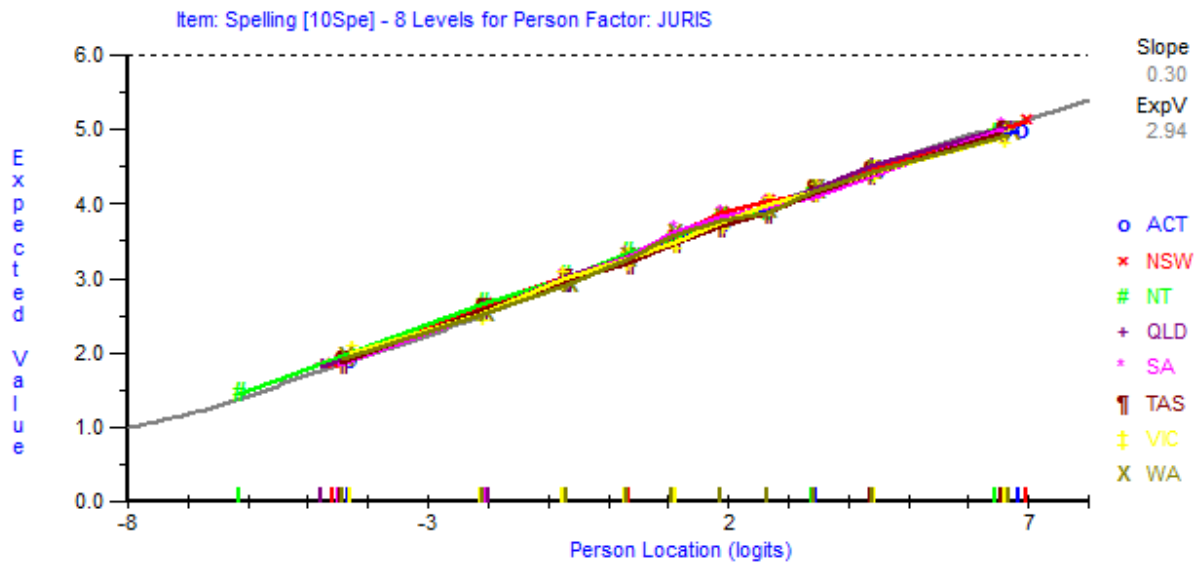


FIGURE J.10 Criterion 10: Spelling



APPENDIX K. SCORE EQUIVALENCE TABLES

TABLE K.1 Year 3 Numeracy Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
3	Numeracy	0	-5.34835	-6.50232	1.49923	60.86236	90.03303	1
3	Numeracy	1	-4.16268	-5.30420	0.89622	132.81288	53.82056	1
3	Numeracy	2	-3.56316	-4.69838	0.71820	169.19409	43.12995	1
3	Numeracy	3	-3.13660	-4.26734	0.62707	195.07927	37.65734	1
3	Numeracy	4	-2.79385	-3.92099	0.57088	215.87857	34.28297	1
3	Numeracy	5	-2.50071	-3.62478	0.53221	233.66683	31.96073	1
3	Numeracy	6	-2.24025	-3.36158	0.50402	249.47274	30.26784	1
3	Numeracy	7	-2.00301	-3.12185	0.48251	263.86920	28.97610	1
3	Numeracy	8	-1.78305	-2.89958	0.46571	277.21715	27.96721	2
3	Numeracy	9	-1.57649	-2.69085	0.45220	289.75198	27.15590	2
3	Numeracy	10	-1.38051	-2.49281	0.44124	301.64485	26.49772	2
3	Numeracy	11	-1.19298	-2.30332	0.43235	313.02426	25.96385	2
3	Numeracy	12	-1.01222	-2.12066	0.42520	323.99351	25.53447	3
3	Numeracy	13	-0.83681	-1.94341	0.41957	334.63788	25.19637	3
3	Numeracy	14	-0.66554	-1.77034	0.41532	345.03123	24.94115	3
3	Numeracy	15	-0.49729	-1.60032	0.41236	355.24141	24.76339	3
3	Numeracy	16	-0.33101	-1.43229	0.41064	365.33209	24.66010	3
3	Numeracy	17	-0.16572	-1.26527	0.41014	375.36212	24.63007	4
3	Numeracy	18	-0.00040	-1.09821	0.41089	385.39455	24.67511	4
3	Numeracy	19	0.16598	-0.93009	0.41292	395.49063	24.79702	4
3	Numeracy	20	0.33451	-0.75979	0.41632	405.71763	25.00120	4
3	Numeracy	21	0.50639	-0.58610	0.42120	416.14821	25.29426	4
3	Numeracy	22	0.68299	-0.40765	0.42776	426.86464	25.68821	5
3	Numeracy	23	0.86590	-0.22282	0.43617	437.96421	26.19325	5
3	Numeracy	24	1.05702	-0.02969	0.44673	449.56221	26.82741	5
3	Numeracy	25	1.25870	0.17411	0.45979	461.80098	27.61170	5
3	Numeracy	26	1.47388	0.39155	0.47576	474.85888	28.57074	5
3	Numeracy	27	1.70624	0.62635	0.49546	488.95928	29.75378	6
3	Numeracy	28	1.96068	0.88346	0.51950	504.39947	31.19745	6
3	Numeracy	29	2.24349	1.16924	0.54899	521.56137	32.96841	6
3	Numeracy	30	2.56296	1.49206	0.58544	540.94763	35.15734	6
3	Numeracy	31	2.93003	1.86299	0.63161	563.22304	37.92998	6
3	Numeracy	32	3.36039	2.29786	0.69321	589.33822	41.62923	6
3	Numeracy	33	3.88308	2.82604	0.78612	621.05693	47.20874	6
3	Numeracy	34	4.57873	3.52900	0.96330	663.27168	57.84891	6
3	Numeracy	35	5.85269	4.81633	1.57391	740.57951	94.51778	6

TABLE K.2 Year 3 Reading Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
3	Reading	0	-5.07050	-5.95147	1.49123	21.46566	100.30470	1
3	Reading	1	-3.89297	-4.64489	0.88827	109.35024	59.74776	1
3	Reading	2	-3.30266	-3.98988	0.70905	153.40822	47.69288	1
3	Reading	3	-2.88638	-3.52797	0.61669	184.47770	41.48046	1
3	Reading	4	-2.55500	-3.16027	0.55922	209.21033	37.61485	1
3	Reading	5	-2.27419	-2.84869	0.51933	230.16816	34.93173	1
3	Reading	6	-2.02689	-2.57428	0.49004	248.62582	32.96159	1
3	Reading	7	-1.80341	-2.32631	0.46760	265.30504	31.45221	1
3	Reading	8	-1.59769	-2.09804	0.44989	280.65918	30.26098	2
3	Reading	9	-1.40559	-1.88489	0.43575	294.99630	29.30988	2
3	Reading	10	-1.22424	-1.68366	0.42420	308.53165	28.53299	2
3	Reading	11	-1.05145	-1.49193	0.41473	321.42799	27.89601	2
3	Reading	12	-0.88556	-1.30786	0.40696	333.80911	27.37338	3
3	Reading	13	-0.72521	-1.12994	0.40064	345.77655	26.94827	3
3	Reading	14	-0.56929	-0.95693	0.39556	357.41374	26.60658	3
3	Reading	15	-0.41687	-0.78780	0.39160	368.78994	26.34022	3
3	Reading	16	-0.26711	-0.62163	0.38866	379.96704	26.14246	4
3	Reading	17	-0.11926	-0.45758	0.38667	391.00155	26.00861	4
3	Reading	18	0.02739	-0.29485	0.38560	401.94727	25.93664	4
3	Reading	19	0.17354	-0.13269	0.38545	412.85464	25.92655	4
3	Reading	20	0.31987	0.02968	0.38624	423.77615	25.97969	4
3	Reading	21	0.46708	0.19303	0.38800	434.76357	26.09807	5
3	Reading	22	0.61595	0.35821	0.39080	445.87408	26.28641	5
3	Reading	23	0.76731	0.52616	0.39475	457.17092	26.55210	5
3	Reading	24	0.92212	0.69794	0.40000	468.72536	26.90523	5
3	Reading	25	1.08147	0.87475	0.40675	480.61815	27.35925	6
3	Reading	26	1.24671	1.05810	0.41527	492.95083	27.93233	6
3	Reading	27	1.41952	1.24985	0.42596	505.84852	28.65138	6
3	Reading	28	1.60205	1.45239	0.43937	519.47198	29.55337	6
3	Reading	29	1.79723	1.66896	0.45626	534.03915	30.68945	6
3	Reading	30	2.00909	1.90404	0.47809	549.85135	32.15780	6
3	Reading	31	2.24372	2.16439	0.50691	567.36329	34.09632	6
3	Reading	32	2.51082	2.46076	0.54648	587.29804	36.75792	6
3	Reading	33	2.82750	2.81215	0.60383	610.93361	40.61546	6
3	Reading	34	3.22817	3.25673	0.69618	640.83743	46.82720	6
3	Reading	35	3.80208	3.89354	0.87536	683.67122	58.87940	6
3	Reading	36	4.96259	5.18124	1.47625	770.28587	99.29710	6

TABLE K.3 Year 3 Spelling Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
3	Spelling	0	-5.95359	-7.15642	1.64848	191.43630	62.82078	1
3	Spelling	1	-4.58162	-5.87033	1.02564	240.44701	39.08540	1
3	Spelling	2	-3.78515	-5.12372	0.84849	268.89905	32.33451	1
3	Spelling	3	-3.16623	-4.54355	0.75488	291.00835	28.76720	2
3	Spelling	4	-2.65139	-4.06094	0.69139	309.39979	26.34770	2
3	Spelling	5	-2.21166	-3.64873	0.64436	325.10842	24.55547	3
3	Spelling	6	-1.82611	-3.28732	0.60886	338.88114	23.20262	3
3	Spelling	7	-1.47867	-2.96163	0.58225	351.29263	22.18856	3
3	Spelling	8	-1.15814	-2.66116	0.56205	362.74304	21.41877	3
3	Spelling	9	-0.85680	-2.37869	0.54677	373.50749	20.83648	3
3	Spelling	10	-0.56940	-2.10928	0.53532	383.77425	20.40014	4
3	Spelling	11	-0.29218	-1.84941	0.52695	393.67745	20.08117	4
3	Spelling	12	-0.02225	-1.59638	0.52124	403.32000	19.86357	4
3	Spelling	13	0.24288	-1.34785	0.51800	412.79105	19.74010	4
3	Spelling	14	0.50558	-1.10159	0.51723	422.17560	19.71076	4
3	Spelling	15	0.76835	-0.85527	0.51914	431.56244	19.78354	5
3	Spelling	16	1.03399	-0.60626	0.52407	441.05179	19.97142	5
3	Spelling	17	1.30584	-0.35143	0.53261	450.76293	20.29686	5
3	Spelling	18	1.58815	-0.08679	0.54566	460.84791	20.79418	5
3	Spelling	19	1.88659	0.19297	0.56465	471.50909	21.51785	5
3	Spelling	20	2.20936	0.49553	0.59173	483.03914	22.54983	6
3	Spelling	21	2.56900	0.83266	0.63093	495.88659	24.04367	6
3	Spelling	22	2.98677	1.22427	0.68991	510.81018	26.29130	6
3	Spelling	23	3.50356	1.70871	0.78594	529.27137	29.95084	6
3	Spelling	24	4.21660	2.37712	0.97328	554.74334	37.09005	6
3	Spelling	25	5.54275	3.62025	1.60476	602.11692	61.15468	6

TABLE K.4 Year 3 Grammar & Punctuation Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
3	GP	0	-4.63340	-5.69939	1.50859	-11.00992	110.88497	1
3	GP	1	-3.43753	-4.31158	0.90425	90.99743	66.46454	1
3	GP	2	-2.82797	-3.60418	0.72611	142.99302	53.37082	1
3	GP	3	-2.39149	-3.09765	0.63548	180.22418	46.70930	1
3	GP	4	-2.03916	-2.68877	0.57964	210.27784	42.60492	1
3	GP	5	-1.73664	-2.33770	0.54145	236.08232	39.79787	1
3	GP	6	-1.46681	-2.02456	0.51416	259.09886	37.79199	1
3	GP	7	-1.22011	-1.73826	0.49353	280.14259	36.27563	2
3	GP	8	-0.99023	-1.47149	0.47793	299.75083	35.12900	2
3	GP	9	-0.77296	-1.21935	0.46598	318.28372	34.25064	2
3	GP	10	-0.56507	-0.97809	0.45704	336.01691	33.59353	3
3	GP	11	-0.36401	-0.74476	0.45064	353.16722	33.12312	3
3	GP	12	-0.16766	-0.51689	0.44651	369.91621	32.81955	3
3	GP	13	0.02590	-0.29227	0.44450	386.42631	32.67181	4
3	GP	14	0.21853	-0.06872	0.44459	402.85777	32.67843	4
3	GP	15	0.41200	0.15580	0.44683	419.36053	32.84307	4
3	GP	16	0.60823	0.38353	0.45140	436.09923	33.17898	5
3	GP	17	0.80940	0.61698	0.45860	453.25836	33.70820	5
3	GP	18	1.01807	0.85914	0.46894	471.05770	34.46821	5
3	GP	19	1.23748	1.11377	0.48320	489.77361	35.51635	6
3	GP	20	1.47209	1.38603	0.50250	509.78537	36.93495	6
3	GP	21	1.72814	1.68318	0.52904	531.62661	38.88570	6
3	GP	22	2.01558	2.01676	0.56649	556.14553	41.63837	6
3	GP	23	2.35158	2.40668	0.62218	584.80559	45.73172	6
3	GP	24	2.77086	2.89326	0.71261	620.57038	52.37854	6
3	GP	25	3.36252	3.57988	0.89063	671.03859	65.46343	6
3	GP	26	4.54008	4.94644	1.49275	771.48401	109.72069	6

TABLE K.5 Year 5 Numeracy Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
5	Numeracy	0	-5.41339	-5.31597	1.51856	132.10605	91.19385	3
5	Numeracy	1	-4.19720	-4.02340	0.90396	209.72856	54.28537	3
5	Numeracy	2	-3.58223	-3.36981	0.71902	248.97850	43.17920	3
5	Numeracy	3	-3.15179	-2.91234	0.62204	276.45088	37.35527	3
5	Numeracy	4	-2.81345	-2.55275	0.56121	298.04528	33.70226	3
5	Numeracy	5	-2.53053	-2.25207	0.51862	316.10197	31.14461	3
5	Numeracy	6	-2.28437	-1.99045	0.48713	331.81300	29.25354	3
5	Numeracy	7	-2.06421	-1.75646	0.46295	345.86476	27.80147	3
5	Numeracy	8	-1.86328	-1.54291	0.44389	358.68905	26.65686	3
5	Numeracy	9	-1.67702	-1.34496	0.42859	370.57651	25.73805	3
5	Numeracy	10	-1.50220	-1.15916	0.41616	381.73433	24.99159	4
5	Numeracy	11	-1.33649	-0.98304	0.40593	392.31083	24.37725	4
5	Numeracy	12	-1.17808	-0.81468	0.39751	402.42133	23.87161	4
5	Numeracy	13	-1.02555	-0.65257	0.39060	412.15650	23.45664	4
5	Numeracy	14	-0.87776	-0.49550	0.38498	421.58900	23.11914	4
5	Numeracy	15	-0.73375	-0.34245	0.38049	430.78009	22.84951	5
5	Numeracy	16	-0.59270	-0.19254	0.37702	439.78261	22.64112	5
5	Numeracy	17	-0.45386	-0.04498	0.37448	448.64401	22.48859	5
5	Numeracy	18	-0.31658	0.10092	0.37283	457.40572	22.38950	5
5	Numeracy	19	-0.18021	0.24585	0.37202	466.10918	22.34086	5
5	Numeracy	20	-0.04414	0.39047	0.37205	474.79402	22.34266	5
5	Numeracy	21	0.09222	0.53539	0.37294	483.49688	22.39611	6
5	Numeracy	22	0.22954	0.68134	0.37469	492.26159	22.50120	6
5	Numeracy	23	0.36848	0.82900	0.37736	501.12899	22.66154	6
5	Numeracy	24	0.50976	0.97915	0.38100	510.14593	22.88013	6
5	Numeracy	25	0.65417	1.13263	0.38574	519.36284	23.16479	6
5	Numeracy	26	0.80262	1.29041	0.39163	528.83798	23.51850	6
5	Numeracy	27	0.95616	1.45359	0.39885	538.63740	23.95208	7
5	Numeracy	28	1.11601	1.62348	0.40755	548.83978	24.47454	7
5	Numeracy	29	1.28363	1.80162	0.41797	559.53759	25.10029	7
5	Numeracy	30	1.46079	1.98991	0.43036	570.84494	25.84434	7
5	Numeracy	31	1.64967	2.19065	0.44529	582.89995	26.74093	8
5	Numeracy	32	1.85309	2.40685	0.46316	595.88338	27.81408	8
5	Numeracy	33	2.07466	2.64233	0.48479	610.02462	29.11302	8
5	Numeracy	34	2.31926	2.90229	0.51138	625.63596	30.70982	8
5	Numeracy	35	2.59376	3.19403	0.54485	643.15578	32.71979	8
5	Numeracy	36	2.90860	3.52864	0.58860	663.25006	35.34711	8
5	Numeracy	37	3.28123	3.92467	0.64999	687.03279	39.03375	8
5	Numeracy	38	3.74616	4.41880	0.74548	716.70670	44.76820	8
5	Numeracy	39	4.39180	5.10499	0.92747	757.91436	55.69721	8
5	Numeracy	40	5.62953	6.42045	1.53988	836.91148	92.47418	8

TABLE K.6 Year 5 Reading Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
5	Reading	0	-5.06234	-3.81429	1.48253	165.21894	99.71951	3
5	Reading	1	-3.89516	-2.78799	0.88123	234.25103	59.27423	3
5	Reading	2	-3.31424	-2.27718	0.70247	268.60967	47.25029	3
5	Reading	3	-2.90630	-1.91848	0.61051	292.73693	41.06477	3
5	Reading	4	-2.58225	-1.63355	0.55335	311.90220	37.22002	3
5	Reading	5	-2.30768	-1.39212	0.51411	328.14152	34.58061	3
5	Reading	6	-2.06571	-1.17935	0.48532	342.45308	32.64411	3
5	Reading	7	-1.84674	-0.98681	0.46338	355.40391	31.16836	3
5	Reading	8	-1.64482	-0.80926	0.44611	367.34647	30.00673	3
5	Reading	9	-1.45593	-0.64317	0.43238	378.51819	29.08320	4
5	Reading	10	-1.27731	-0.48611	0.42117	389.08253	28.32919	4
5	Reading	11	-1.10689	-0.33626	0.41197	399.16190	27.71037	4
5	Reading	12	-0.94306	-0.19221	0.40441	408.85115	27.20186	4
5	Reading	13	-0.78456	-0.05284	0.39821	418.22560	26.78483	4
5	Reading	14	-0.63035	0.08276	0.39319	427.34647	26.44716	5
5	Reading	15	-0.47957	0.21534	0.38917	436.26421	26.17677	5
5	Reading	16	-0.33146	0.34557	0.38609	445.02388	25.96960	5
5	Reading	17	-0.18535	0.47405	0.38385	453.66584	25.81893	5
5	Reading	18	-0.04063	0.60130	0.38240	462.22506	25.72140	5
5	Reading	19	0.10324	0.72781	0.38172	470.73451	25.67566	5
5	Reading	20	0.24685	0.85408	0.38182	479.22782	25.68238	6
5	Reading	21	0.39076	0.98062	0.38272	487.73929	25.74292	6
5	Reading	22	0.53557	1.10795	0.38448	496.30389	25.86130	6
5	Reading	23	0.68191	1.23663	0.38717	504.95931	26.04224	6
5	Reading	24	0.83053	1.36731	0.39091	513.74924	26.29381	6
5	Reading	25	0.98227	1.50074	0.39587	522.72415	26.62743	6
5	Reading	26	1.13817	1.63782	0.40226	531.94458	27.05724	7
5	Reading	27	1.29950	1.77968	0.41039	541.48651	27.60409	7
5	Reading	28	1.46787	1.92773	0.42067	551.44481	28.29555	7
5	Reading	29	1.64545	2.08387	0.43360	561.94727	29.16527	7
5	Reading	30	1.83503	2.25057	0.45023	573.16002	30.28385	7
5	Reading	31	2.04077	2.43148	0.47169	585.32858	31.72732	8
5	Reading	32	2.26872	2.63191	0.50026	598.81012	33.64902	8
5	Reading	33	2.52863	2.86045	0.53968	614.18242	36.30053	8
5	Reading	34	2.83764	3.13216	0.59698	632.45847	40.15471	8
5	Reading	35	3.23027	3.47740	0.68938	655.68037	46.36981	8
5	Reading	36	3.79581	3.97468	0.86859	689.12894	58.42403	8
5	Reading	37	4.94775	4.98758	1.46852	757.25970	98.77716	8

TABLE K.7 Year 5 Spelling Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
5	Spelling	0	-5.65652	-4.53922	1.73445	291.17335	66.09695	3
5	Spelling	1	-4.10874	-3.14854	1.03851	344.16981	39.57585	3
5	Spelling	2	-3.28181	-2.40554	0.81437	372.48428	31.03426	3
5	Spelling	3	-2.73057	-1.91025	0.69945	391.35894	26.65485	4
5	Spelling	4	-2.30657	-1.52929	0.63025	405.87668	24.01776	4
5	Spelling	5	-1.95168	-1.21042	0.58481	418.02828	22.28612	4
5	Spelling	6	-1.63926	-0.92971	0.55330	428.72566	21.08532	5
5	Spelling	7	-1.35490	-0.67421	0.53086	438.46233	20.23017	5
5	Spelling	8	-1.08988	-0.43609	0.51467	447.53668	19.61320	5
5	Spelling	9	-0.83819	-0.20995	0.50329	456.15449	19.17953	5
5	Spelling	10	-0.59543	0.00817	0.49575	464.46667	18.89219	5
5	Spelling	11	-0.35811	0.22140	0.49147	472.59251	18.72909	5
5	Spelling	12	-0.12325	0.43243	0.49008	480.63450	18.67612	6
5	Spelling	13	0.11184	0.64365	0.49139	488.68374	18.72604	6
5	Spelling	14	0.34974	0.85741	0.49535	496.82977	18.87695	6
5	Spelling	15	0.59306	1.07603	0.50203	505.16101	19.13151	6
5	Spelling	16	0.84461	1.30205	0.51162	513.77425	19.49697	6
5	Spelling	17	1.10755	1.53830	0.52454	522.77733	19.98933	6
5	Spelling	18	1.38572	1.78823	0.54145	532.30174	20.63374	7
5	Spelling	19	1.68413	2.05636	0.56348	542.51972	21.47327	7
5	Spelling	20	2.00996	2.34911	0.59271	553.67593	22.58717	7
5	Spelling	21	2.37433	2.67650	0.63288	566.15220	24.11798	7
5	Spelling	22	2.79632	3.05566	0.69113	580.60135	26.33779	7
5	Spelling	23	3.31260	3.51954	0.78449	598.27903	29.89558	8
5	Spelling	24	4.01341	4.14921	0.96643	622.27468	36.82901	8
5	Spelling	25	5.30975	5.31398	1.58692	666.66209	60.47483	8

TABLE K.8 Year 5 Grammar & Punctuation Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
5	GP	0	-5.00922	-3.98828	1.57079	114.76075	115.45682	3
5	GP	1	-3.72748	-2.84535	0.94673	198.76883	69.58692	3
5	GP	2	-3.05346	-2.24433	0.75998	242.94524	55.86035	3
5	GP	3	-2.57077	-1.81391	0.66328	274.58214	48.75266	3
5	GP	4	-2.18522	-1.47012	0.60256	299.85153	44.28960	3
5	GP	5	-1.85794	-1.17828	0.56101	321.30246	41.23558	3
5	GP	6	-1.56885	-0.92050	0.53112	340.24991	39.03859	3
5	GP	7	-1.30615	-0.68625	0.50902	357.46784	37.41419	3
5	GP	8	-1.06224	-0.46876	0.49251	373.45388	36.20066	3
5	GP	9	-0.83194	-0.26340	0.48016	388.54833	35.29291	4
5	GP	10	-0.61139	-0.06673	0.47119	403.00404	34.63359	4
5	GP	11	-0.39763	0.12387	0.46505	417.01360	34.18229	4
5	GP	12	-0.18822	0.31061	0.46136	430.73943	33.91106	5
5	GP	13	0.01893	0.49532	0.45995	444.31606	33.80742	5
5	GP	14	0.22583	0.67981	0.46071	457.87652	33.86329	5
5	GP	15	0.43439	0.86579	0.46370	471.54649	34.08306	5
5	GP	16	0.64665	1.05506	0.46905	485.45829	34.47630	6
5	GP	17	0.86485	1.24963	0.47712	499.75965	35.06946	6
5	GP	18	1.09177	1.45197	0.48829	514.63212	35.89048	6
5	GP	19	1.33079	1.66511	0.50348	530.29842	37.00698	7
5	GP	20	1.58666	1.89327	0.52380	547.06872	38.50055	7
5	GP	21	1.86611	2.14245	0.55161	565.38405	40.54465	7
5	GP	22	2.17992	2.42228	0.59049	585.95222	43.40243	8
5	GP	23	2.54656	2.74921	0.64810	609.98236	47.63690	8
5	GP	24	3.00277	3.15601	0.74109	639.88313	54.47189	8
5	GP	25	3.64052	3.72469	0.92321	681.68247	67.85814	8
5	GP	26	4.87631	4.82665	1.53753	762.67916	113.01213	8

TABLE K.9 Year 7 Numeracy Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
7	Numeracy	0	-5.92480	-4.30710	1.49600	192.69157	89.83906	4
7	Numeracy	1	-4.73661	-3.12271	0.88630	263.81756	53.22484	4
7	Numeracy	2	-4.14409	-2.53208	0.70141	299.28657	42.12167	4
7	Numeracy	3	-3.73326	-2.12257	0.60381	323.87881	36.26051	4
7	Numeracy	4	-3.41383	-1.80416	0.54110	343.00024	32.49460	4
7	Numeracy	5	-3.15012	-1.54129	0.49660	358.78633	29.82224	4
7	Numeracy	6	-2.92403	-1.31593	0.46293	372.31984	27.80026	4
7	Numeracy	7	-2.72499	-1.11753	0.43671	384.23433	26.22568	4
7	Numeracy	8	-2.54634	-0.93945	0.41546	394.92854	24.94956	4
7	Numeracy	9	-2.38351	-0.77714	0.39791	404.67571	23.89563	4
7	Numeracy	10	-2.23329	-0.62740	0.38318	413.66803	23.01105	4
7	Numeracy	11	-2.09332	-0.48788	0.37068	422.04660	22.26039	4
7	Numeracy	12	-1.96179	-0.35677	0.35995	429.92013	21.61602	5
7	Numeracy	13	-1.83731	-0.23269	0.35069	437.37149	21.05993	5
7	Numeracy	14	-1.71880	-0.11456	0.34263	444.46553	20.57591	5
7	Numeracy	15	-1.60535	-0.00147	0.33558	451.25691	20.15253	5
7	Numeracy	16	-1.49624	0.10729	0.32944	457.78825	19.78381	5
7	Numeracy	17	-1.39087	0.21233	0.32404	464.09620	19.45952	5
7	Numeracy	18	-1.28872	0.31415	0.31928	470.21079	19.17367	5
7	Numeracy	19	-1.18937	0.41318	0.31511	476.15782	18.92325	5
7	Numeracy	20	-1.09243	0.50981	0.31145	481.96073	18.70346	6
7	Numeracy	21	-0.99757	0.60437	0.30826	487.63932	18.51189	6
7	Numeracy	22	-0.90450	0.69714	0.30549	493.21043	18.34554	6
7	Numeracy	23	-0.81298	0.78837	0.30310	498.68905	18.20202	6
7	Numeracy	24	-0.72274	0.87832	0.30109	504.09080	18.08131	6
7	Numeracy	25	-0.63360	0.96717	0.29940	509.42650	17.97982	6
7	Numeracy	26	-0.54534	1.05515	0.29803	514.70994	17.89755	6
7	Numeracy	27	-0.45780	1.14241	0.29695	519.95016	17.83269	6
7	Numeracy	28	-0.37079	1.22914	0.29615	525.15854	17.78465	6
7	Numeracy	29	-0.28415	1.31550	0.29562	530.34470	17.75282	7
7	Numeracy	30	-0.19773	1.40165	0.29536	535.51826	17.73721	7
7	Numeracy	31	-0.11138	1.48772	0.29535	540.68700	17.73661	7
7	Numeracy	32	-0.02494	1.57388	0.29560	545.86116	17.75162	7
7	Numeracy	33	0.06173	1.66028	0.29610	551.04972	17.78165	7
7	Numeracy	34	0.14877	1.74704	0.29685	556.25991	17.82669	7
7	Numeracy	35	0.23635	1.83434	0.29784	561.50252	17.88614	7
7	Numeracy	36	0.32460	1.92231	0.29908	566.78537	17.96061	7
7	Numeracy	37	0.41369	2.01111	0.30059	572.11806	18.05129	7
7	Numeracy	38	0.50377	2.10090	0.30237	577.51021	18.15818	7
7	Numeracy	39	0.59501	2.19185	0.30442	582.97202	18.28129	8
7	Numeracy	40	0.68759	2.28413	0.30676	588.51369	18.42181	8
7	Numeracy	41	0.78170	2.37794	0.30940	594.14725	18.58035	8
7	Numeracy	42	0.87754	2.47348	0.31236	599.88470	18.75811	8
7	Numeracy	43	0.97533	2.57095	0.31566	605.73805	18.95628	8
7	Numeracy	44	1.07530	2.67060	0.31932	611.72232	19.17607	8

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
7	Numeracy	45	1.17772	2.77270	0.32338	617.85371	19.41989	8
7	Numeracy	46	1.28289	2.87753	0.32787	624.14905	19.68953	8
7	Numeracy	47	1.39112	2.98541	0.33283	630.62755	19.98739	8
7	Numeracy	48	1.50280	3.09674	0.33840	637.31324	20.32188	9
7	Numeracy	49	1.61837	3.21194	0.34456	644.23132	20.69181	9
7	Numeracy	50	1.73834	3.33152	0.35145	651.41244	21.10557	9
7	Numeracy	51	1.86332	3.45610	0.35919	658.89383	21.57038	9
7	Numeracy	52	1.99406	3.58642	0.36795	666.71991	22.09644	9
7	Numeracy	53	2.13150	3.72342	0.37796	674.94715	22.69757	9
7	Numeracy	54	2.27680	3.86826	0.38952	683.64521	23.39178	9
7	Numeracy	55	2.43150	4.02246	0.40303	692.90536	24.20310	9
7	Numeracy	56	2.59764	4.18807	0.41908	702.85071	25.16695	9
7	Numeracy	57	2.77804	4.36789	0.43852	713.64941	26.33437	9
7	Numeracy	58	2.97674	4.56596	0.46261	725.54408	27.78105	9
7	Numeracy	59	3.19976	4.78827	0.49375	738.89443	29.65109	9
7	Numeracy	60	3.45687	5.04455	0.53543	754.28477	32.15410	9
7	Numeracy	61	3.76518	5.35188	0.59506	772.74081	35.73505	9
7	Numeracy	62	4.15938	5.74481	0.68943	796.33738	41.40223	9
7	Numeracy	63	4.72886	6.31247	0.87048	830.42698	52.27480	9
7	Numeracy	64	5.88727	7.46718	1.47308	899.77060	88.46265	9

TABLE K.10 Year 7 Non-Calculator Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
7	NC	0	-5.54170	-3.92522	1.57760	215.62455	94.73937	4
7	NC	1	-4.25595	-2.64359	0.95659	292.59008	57.44595	4
7	NC	2	-3.56558	-1.95543	0.77120	333.91605	46.31276	4
7	NC	3	-3.06452	-1.45597	0.67269	363.91004	40.39695	4
7	NC	4	-2.66434	-1.05707	0.60909	387.86512	36.57759	4
7	NC	5	-2.32794	-0.72175	0.56384	408.00204	33.86020	4
7	NC	6	-2.03506	-0.42980	0.53001	425.53447	31.82861	4
7	NC	7	-1.77335	-0.16893	0.50388	441.20046	30.25943	5
7	NC	8	-1.53462	0.06904	0.48360	455.49123	29.04156	5
7	NC	9	-1.31333	0.28962	0.46746	468.73769	28.07230	5
7	NC	10	-1.10535	0.49693	0.45467	481.18724	27.30423	6
7	NC	11	-0.90758	0.69407	0.44465	493.02606	26.70250	6
7	NC	12	-0.71754	0.88350	0.43698	504.40187	26.24189	6
7	NC	13	-0.53320	1.06725	0.43137	515.43658	25.90500	6
7	NC	14	-0.35283	1.24704	0.42761	526.23349	25.67920	6
7	NC	15	-0.17487	1.42443	0.42556	536.88626	25.55609	7
7	NC	16	0.00209	1.60083	0.42514	547.47958	25.53087	7
7	NC	17	0.17943	1.77760	0.42631	558.09512	25.60113	7
7	NC	18	0.35850	1.95610	0.42908	568.81456	25.76748	7
7	NC	19	0.54074	2.13775	0.43351	579.72316	26.03351	7
7	NC	20	0.72763	2.32405	0.43969	590.91100	26.40464	8
7	NC	21	0.92085	2.51665	0.44776	602.47718	26.88926	8
7	NC	22	1.12228	2.71743	0.45794	614.53459	27.50060	8
7	NC	23	1.33413	2.92861	0.47052	627.21655	28.25607	8
7	NC	24	1.55906	3.15282	0.48593	640.68100	29.18148	9
7	NC	25	1.80040	3.39338	0.50495	655.12731	30.32368	9
7	NC	26	2.06261	3.65475	0.52868	670.82332	31.74874	9
7	NC	27	2.35199	3.94321	0.55907	688.14617	33.57374	9
7	NC	28	2.67836	4.26853	0.59972	707.68256	36.01489	9
7	NC	29	3.05881	4.64777	0.65764	730.45700	39.49315	9
7	NC	30	3.52785	5.11531	0.75002	758.53411	45.04084	9
7	NC	31	4.17466	5.76005	0.93005	797.25258	55.85215	9
7	NC	32	5.41256	6.99398	1.54152	871.35359	92.57266	9

TABLE K.11 Year 7 Calculator Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
7	CA	0	-4.83292	-3.21871	1.47962	258.05249	88.85539	4
7	CA	1	-3.66885	-2.05837	0.87878	327.73421	52.77324	4
7	CA	2	-3.09156	-1.48292	0.69963	362.29162	42.01477	4
7	CA	3	-2.68731	-1.07997	0.60790	386.48991	36.50613	4
7	CA	4	-2.36676	-0.76044	0.55122	405.67860	33.10233	4
7	CA	5	-2.09527	-0.48982	0.51258	421.93010	30.78189	4
7	CA	6	-1.85559	-0.25091	0.48484	436.27732	29.11602	5
7	CA	7	-1.63787	-0.03388	0.46422	449.31059	27.87773	5
7	CA	8	-1.43588	0.16746	0.44866	461.40163	26.94331	5
7	CA	9	-1.24548	0.35725	0.43672	472.79906	26.22628	5
7	CA	10	-1.06359	0.53856	0.42767	483.68724	25.68280	6
7	CA	11	-0.88796	0.71363	0.42092	494.20070	25.27744	6
7	CA	12	-0.71682	0.88422	0.41609	504.44511	24.98739	6
7	CA	13	-0.54871	1.05179	0.41290	514.50817	24.79582	6
7	CA	14	-0.38239	1.21758	0.41115	524.46433	24.69073	6
7	CA	15	-0.21677	1.38267	0.41072	534.37845	24.66491	7
7	CA	16	-0.05082	1.54809	0.41153	544.31239	24.71355	7
7	CA	17	0.11637	1.71474	0.41358	554.32020	24.83666	7
7	CA	18	0.28585	1.88368	0.41683	564.46553	25.03183	7
7	CA	19	0.45861	2.05589	0.42135	574.80723	25.30327	7
7	CA	20	0.63573	2.23244	0.42722	585.40956	25.65578	8
7	CA	21	0.81844	2.41457	0.43460	596.34699	26.09897	8
7	CA	22	1.00814	2.60366	0.44369	607.70238	26.64485	8
7	CA	23	1.20653	2.80141	0.45482	619.57783	27.31324	8
7	CA	24	1.41573	3.00994	0.46846	632.10065	28.13236	8
7	CA	25	1.63854	3.23204	0.48535	645.43839	29.14665	9
7	CA	26	1.87880	3.47153	0.50697	659.82044	30.44499	9
7	CA	27	2.14243	3.73432	0.53516	675.60173	32.13788	9
7	CA	28	2.43882	4.02976	0.57375	693.34374	34.45532	9
7	CA	29	2.78477	4.37460	0.62979	714.05237	37.82068	9
7	CA	30	3.21440	4.80286	0.72069	739.77060	43.27949	9
7	CA	31	3.81672	5.40325	0.89849	775.82573	53.95688	9
7	CA	32	5.00484	6.58757	1.50156	846.94751	90.17295	9

TABLE K.12 Year 7 Reading Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
7	Reading	0	-5.27898	-4.33716	1.46701	130.04910	98.67559	4
7	Reading	1	-4.12759	-3.09573	0.86596	213.55149	58.24712	4
7	Reading	2	-3.56383	-2.48788	0.68549	254.43734	46.10816	4
7	Reading	3	-3.17440	-2.06800	0.59133	282.67976	39.77467	4
7	Reading	4	-2.87010	-1.73990	0.53199	304.74877	35.78328	4
7	Reading	5	-2.61646	-1.46643	0.49062	323.14320	33.00061	4
7	Reading	6	-2.39649	-1.22926	0.45983	339.09598	30.92958	4
7	Reading	7	-2.20052	-1.01796	0.43589	353.30867	29.31930	4
7	Reading	8	-2.02255	-0.82607	0.41672	366.21578	28.02986	4
7	Reading	9	-1.85853	-0.64923	0.40101	378.11058	26.97316	4
7	Reading	10	-1.70564	-0.48438	0.38791	389.19890	26.09202	4
7	Reading	11	-1.56181	-0.32930	0.37685	399.63005	25.34809	4
7	Reading	12	-1.42548	-0.18231	0.36740	409.51705	24.71245	4
7	Reading	13	-1.29539	-0.04205	0.35934	418.95137	24.17031	4
7	Reading	14	-1.17057	0.09253	0.35238	428.00363	23.70216	5
7	Reading	15	-1.05024	0.22227	0.34636	436.73034	23.29724	5
7	Reading	16	-0.93370	0.34792	0.34116	445.18195	22.94747	5
7	Reading	17	-0.82039	0.47009	0.33668	453.39948	22.64613	5
7	Reading	18	-0.70983	0.58930	0.33285	461.41791	22.38851	5
7	Reading	19	-0.60157	0.70603	0.32961	469.26952	22.17058	5
7	Reading	20	-0.49525	0.82066	0.32689	476.97989	21.98762	5
7	Reading	21	-0.39048	0.93362	0.32470	484.57792	21.84032	6
7	Reading	22	-0.28697	1.04523	0.32297	492.08516	21.72395	6
7	Reading	23	-0.18443	1.15579	0.32169	499.52176	21.63786	6
7	Reading	24	-0.08255	1.26563	0.32084	506.90993	21.58068	6
7	Reading	25	0.01889	1.37501	0.32041	514.26717	21.55176	6
7	Reading	26	0.12020	1.48424	0.32040	521.61431	21.55109	6
7	Reading	27	0.22163	1.59360	0.32081	528.97020	21.57866	6
7	Reading	28	0.32345	1.70338	0.32164	536.35434	21.63449	7
7	Reading	29	0.42592	1.81387	0.32292	543.78624	21.72059	7
7	Reading	30	0.52934	1.92537	0.32466	551.28607	21.83763	7
7	Reading	31	0.63401	2.03823	0.32689	558.87738	21.98762	7
7	Reading	32	0.74026	2.15279	0.32965	566.58304	22.17327	7
7	Reading	33	0.84845	2.26944	0.33299	574.42927	22.39793	7
7	Reading	34	0.95899	2.38862	0.33697	582.44569	22.66564	8
7	Reading	35	1.07236	2.51086	0.34166	590.66792	22.98110	8
7	Reading	36	1.18910	2.63673	0.34718	599.13432	23.35239	8
7	Reading	37	1.30986	2.76693	0.35365	607.89198	23.78758	8
7	Reading	38	1.43542	2.90231	0.36123	616.99805	24.29744	8
7	Reading	39	1.56674	3.04390	0.37014	626.52183	24.89675	8
7	Reading	40	1.70501	3.19298	0.38075	636.54940	25.61041	9
7	Reading	41	1.85182	3.35127	0.39343	647.19648	26.46331	9
7	Reading	42	2.00921	3.52097	0.40876	658.61102	27.49445	9
7	Reading	43	2.18002	3.70514	0.42763	670.99886	28.76370	9
7	Reading	44	2.36828	3.90812	0.45135	684.65191	30.35918	9

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
7	Reading	45	2.58005	4.13645	0.48203	700.01009	32.42282	9
7	Reading	46	2.82504	4.40060	0.52324	717.77763	35.19473	9
7	Reading	47	3.12023	4.71887	0.58277	739.18544	39.19890	9
7	Reading	48	3.50022	5.12858	0.67709	766.74379	45.54315	9
7	Reading	49	4.05427	5.72595	0.85777	806.92473	57.69624	9
7	Reading	50	5.19578	6.95673	1.45783	889.71077	98.05812	9

TABLE K.13 Year 7 Spelling Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
7	Spelling	0	-5.14759	-2.94208	1.51230	352.03765	57.63119	4
7	Spelling	1	-3.94934	-1.73700	0.90927	397.96121	34.65074	4
7	Spelling	2	-3.33485	-1.11901	0.73286	421.51176	27.92805	4
7	Spelling	3	-2.89079	-0.67242	0.64415	438.53054	24.54746	5
7	Spelling	4	-2.52841	-0.30797	0.59011	452.41912	22.48809	5
7	Spelling	5	-2.21379	0.00844	0.55343	464.47696	21.09028	5
7	Spelling	6	-1.93045	0.29340	0.52690	475.33631	20.07927	5
7	Spelling	7	-1.66939	0.55595	0.50674	485.34164	19.31100	6
7	Spelling	8	-1.42515	0.80158	0.49089	494.70218	18.70699	6
7	Spelling	9	-1.19417	1.03388	0.47810	503.55474	18.21958	6
7	Spelling	10	-0.97387	1.25543	0.46769	511.99764	17.82287	6
7	Spelling	11	-0.76223	1.46828	0.45927	520.10899	17.50200	6
7	Spelling	12	-0.55753	1.67414	0.45259	527.95397	17.24744	6
7	Spelling	13	-0.35823	1.87458	0.44753	535.59239	17.05461	7
7	Spelling	14	-0.16291	2.07101	0.44402	543.07801	16.92085	7
7	Spelling	15	0.02981	2.26483	0.44203	550.46416	16.84501	7
7	Spelling	16	0.22132	2.45743	0.44159	557.80382	16.82825	7
7	Spelling	17	0.41296	2.65017	0.44273	565.14881	16.87169	7
7	Spelling	18	0.60618	2.84449	0.44555	572.55402	16.97915	7
7	Spelling	19	0.80253	3.04196	0.45023	580.07927	17.15750	7
7	Spelling	20	1.00376	3.24433	0.45700	587.79124	17.41549	8
7	Spelling	21	1.21195	3.45371	0.46621	595.77036	17.76647	8
7	Spelling	22	1.42960	3.67260	0.47841	604.11189	18.23139	8
7	Spelling	23	1.66004	3.90435	0.49428	612.94349	18.83617	8
7	Spelling	24	1.90765	4.15338	0.51528	622.43360	19.63645	8
7	Spelling	25	2.17895	4.42622	0.54318	632.83107	20.69967	8
7	Spelling	26	2.48394	4.73295	0.58194	644.52003	22.17675	9
7	Spelling	27	2.84008	5.09112	0.63859	658.16928	24.33558	9
7	Spelling	28	3.28221	5.53577	0.73019	675.11413	27.82630	9
7	Spelling	29	3.89978	6.15686	0.90959	698.78282	34.66293	9
7	Spelling	30	5.10646	7.37042	1.51664	745.02953	57.79658	9

TABLE K.14 Year 7 Grammar & Punctuation Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
7	GP	0	-4.88008	-4.37696	1.51264	86.19184	111.18265	4
7	GP	1	-3.68023	-3.04549	0.90848	184.05807	66.77545	4
7	GP	2	-3.06554	-2.36336	0.73087	234.19625	53.72069	4
7	GP	3	-2.62311	-1.87240	0.64075	270.28298	47.09666	4
7	GP	4	-2.26434	-1.47427	0.58527	299.54649	43.01874	4
7	GP	5	-1.95523	-1.13125	0.54731	324.75928	40.22859	4
7	GP	6	-1.67899	-0.82471	0.51978	347.29070	38.20507	4
7	GP	7	-1.42607	-0.54404	0.49906	367.92062	36.68210	4
7	GP	8	-1.19047	-0.28260	0.48299	387.13708	35.50092	4
7	GP	9	-0.96801	-0.03573	0.47043	405.28262	34.57773	4
7	GP	10	-0.75561	0.19997	0.46065	422.60713	33.85888	4
7	GP	11	-0.55091	0.42712	0.45315	439.30320	33.30761	5
7	GP	12	-0.35194	0.64792	0.44767	455.53252	32.90481	5
7	GP	13	-0.15706	0.86418	0.44396	471.42815	32.63212	5
7	GP	14	0.03524	1.07757	0.44195	487.11283	32.48438	6
7	GP	15	0.22642	1.28972	0.44162	502.70636	32.46012	6
7	GP	16	0.41787	1.50218	0.44301	518.32268	32.56229	6
7	GP	17	0.61110	1.71660	0.44625	534.08306	32.80044	7
7	GP	18	0.80780	1.93488	0.45156	550.12716	33.19074	7
7	GP	19	1.00991	2.15916	0.45932	566.61227	33.76112	7
7	GP	20	1.21986	2.39214	0.47005	583.73686	34.54980	8
7	GP	21	1.44079	2.63731	0.48459	601.75744	35.61852	8
7	GP	22	1.67709	2.89953	0.50406	621.03124	37.04961	8
7	GP	23	1.93499	3.18572	0.53074	642.06689	39.01066	9
7	GP	24	2.22442	3.50691	0.56830	665.67512	41.77141	9
7	GP	25	2.56265	3.88224	0.62411	693.26277	45.87358	9
7	GP	26	2.98450	4.35037	0.71464	727.67144	52.52775	9
7	GP	27	3.57917	5.01027	0.89287	776.17567	65.62808	9
7	GP	28	4.76032	6.32099	1.49572	872.51672	109.93899	9

TABLE K.15 Year 9 Numeracy Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
9	Numeracy	0	-5.86141	-3.86920	1.47133	218.98871	88.35755	5
9	Numeracy	1	-4.70447	-2.62503	0.86861	293.70466	52.16250	5
9	Numeracy	2	-4.13680	-2.01455	0.68718	330.36572	41.26712	5
9	Numeracy	3	-3.74481	-1.59301	0.59232	355.68040	35.57050	5
9	Numeracy	4	-3.43908	-1.26423	0.53222	375.42457	31.96133	5
9	Numeracy	5	-3.18494	-0.99092	0.49008	391.83762	29.43070	5
9	Numeracy	6	-2.96523	-0.75465	0.45857	406.02630	27.53843	5
9	Numeracy	7	-2.77015	-0.54486	0.43406	418.62479	26.06654	5
9	Numeracy	8	-2.59359	-0.35499	0.41428	430.02702	24.87869	5
9	Numeracy	9	-2.43147	-0.18064	0.39797	440.49724	23.89923	5
9	Numeracy	10	-2.28090	-0.01872	0.38428	450.22099	23.07711	5
9	Numeracy	11	-2.13976	0.13306	0.37263	459.33582	22.37749	5
9	Numeracy	12	-2.00648	0.27639	0.36261	467.94319	21.77576	5
9	Numeracy	13	-1.87981	0.41261	0.35391	476.12359	21.25330	5
9	Numeracy	14	-1.75876	0.54279	0.34631	483.94127	20.79690	6
9	Numeracy	15	-1.64255	0.66776	0.33961	491.44607	20.39455	6
9	Numeracy	16	-1.53050	0.78826	0.33375	498.68244	20.04264	6
9	Numeracy	17	-1.42208	0.90486	0.32857	505.68460	19.73156	6
9	Numeracy	18	-1.31681	1.01806	0.32397	512.48258	19.45532	6
9	Numeracy	19	-1.21430	1.12830	0.31991	519.10281	19.21151	6
9	Numeracy	20	-1.11418	1.23597	0.31632	525.56870	18.99592	6
9	Numeracy	21	-1.01616	1.34138	0.31316	531.89887	18.80615	7
9	Numeracy	22	-0.91996	1.44484	0.31040	538.11194	18.64040	7
9	Numeracy	23	-0.82533	1.54660	0.30800	544.22292	18.49628	7
9	Numeracy	24	-0.73205	1.64691	0.30594	550.24682	18.37257	7
9	Numeracy	25	-0.63990	1.74601	0.30420	556.19805	18.26808	7
9	Numeracy	26	-0.54871	1.84408	0.30273	562.08744	18.17980	7
9	Numeracy	27	-0.45830	1.94131	0.30156	567.92638	18.10954	7
9	Numeracy	28	-0.36850	2.03788	0.30065	573.72568	18.05489	7
9	Numeracy	29	-0.27915	2.13396	0.29999	579.49556	18.01525	7
9	Numeracy	30	-0.19011	2.22972	0.29959	585.24622	17.99123	8
9	Numeracy	31	-0.10121	2.32532	0.29943	590.98727	17.98162	8
9	Numeracy	32	-0.01235	2.42088	0.29950	596.72592	17.98583	8
9	Numeracy	33	0.07664	2.51658	0.29982	602.47298	18.00504	8
9	Numeracy	34	0.16591	2.61258	0.30036	608.23805	18.03747	8
9	Numeracy	35	0.25557	2.70900	0.30114	614.02834	18.08431	8
9	Numeracy	36	0.34578	2.80601	0.30216	619.85407	18.14557	8
9	Numeracy	37	0.43669	2.90378	0.30341	625.72544	18.22063	8
9	Numeracy	38	0.52843	3.00243	0.30493	631.64965	18.31191	8
9	Numeracy	39	0.62117	3.10217	0.30670	637.63932	18.41821	9
9	Numeracy	40	0.71507	3.20315	0.30874	643.70346	18.54072	9
9	Numeracy	41	0.81030	3.30556	0.31107	649.85347	18.68064	9
9	Numeracy	42	0.90707	3.40962	0.31370	656.10257	18.83858	9
9	Numeracy	43	1.00556	3.51554	0.31667	662.46337	19.01693	9
9	Numeracy	44	1.10602	3.62358	0.31998	668.95148	19.21571	9

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
9	Numeracy	45	1.20868	3.73398	0.32369	675.58131	19.43851	9
9	Numeracy	46	1.31384	3.84706	0.32783	682.37209	19.68712	9
9	Numeracy	47	1.42182	3.96319	0.33245	689.34602	19.96457	10
9	Numeracy	48	1.53299	4.08274	0.33761	696.52534	20.27444	10
9	Numeracy	49	1.64778	4.20618	0.34345	703.93827	20.62515	10
9	Numeracy	50	1.76670	4.33407	0.35000	711.61842	21.01850	10
9	Numeracy	51	1.89038	4.46708	0.35742	719.60605	21.46409	10
9	Numeracy	52	2.01956	4.60600	0.36588	727.94859	21.97214	10
9	Numeracy	53	2.15517	4.75183	0.37560	736.70610	22.55585	10
9	Numeracy	54	2.29839	4.90585	0.38688	745.95544	23.23325	10
9	Numeracy	55	2.45075	5.06970	0.40014	755.79510	24.02955	10
9	Numeracy	56	2.61428	5.24556	0.41596	766.35599	24.97958	10
9	Numeracy	57	2.79177	5.43643	0.43518	777.81828	26.13380	10
9	Numeracy	58	2.98720	5.64660	0.45907	790.43959	27.56846	10
9	Numeracy	59	3.20656	5.88250	0.48989	804.60605	29.41929	10
9	Numeracy	60	3.45949	6.15450	0.53130	820.94043	31.90608	10
9	Numeracy	61	3.76297	6.48086	0.59064	840.53927	35.46961	10
9	Numeracy	62	4.15148	6.89866	0.68471	865.62935	41.11878	10
9	Numeracy	63	4.71418	7.50379	0.86521	901.96913	51.95832	10
9	Numeracy	64	5.86440	8.74074	1.46618	976.25150	88.04828	10

TABLE K.16 Year 9 Non-Calculator Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
9	NC	0	-5.13090	-3.08361	1.50955	266.16563	90.65277	5
9	NC	1	-3.93188	-1.79418	0.90354	343.59957	54.26015	5
9	NC	2	-3.32170	-1.13799	0.72411	383.00564	43.48487	5
9	NC	3	-2.88694	-0.67045	0.63203	411.08275	37.95520	5
9	NC	4	-2.53823	-0.29545	0.57488	433.60257	34.52318	5
9	NC	5	-2.24087	0.02433	0.53555	452.80627	32.16130	5
9	NC	6	-1.97747	0.30759	0.50690	469.81684	30.44079	5
9	NC	7	-1.73795	0.56517	0.48547	485.28525	29.15386	6
9	NC	8	-1.51602	0.80383	0.46886	499.61746	28.15638	6
9	NC	9	-1.30724	1.02836	0.45591	513.10113	27.37869	6
9	NC	10	-1.10845	1.24213	0.44583	525.93863	26.77336	6
9	NC	11	-0.91722	1.44778	0.43806	538.28849	26.30675	7
9	NC	12	-0.73162	1.64738	0.43225	550.27504	25.95784	7
9	NC	13	-0.55009	1.84259	0.42810	561.99796	25.70862	7
9	NC	14	-0.37131	2.03485	0.42542	573.54372	25.54768	7
9	NC	15	-0.19407	2.22546	0.42410	584.99039	25.46841	8
9	NC	16	-0.01731	2.41555	0.42406	596.40584	25.46601	8
9	NC	17	0.16001	2.60624	0.42525	607.85731	25.53747	8
9	NC	18	0.33890	2.79861	0.42769	619.40968	25.68400	8
9	NC	19	0.52040	2.99380	0.43141	631.13140	25.90740	8
9	NC	20	0.70564	3.19301	0.43653	643.09452	26.21487	9
9	NC	21	0.89588	3.39759	0.44320	655.38013	26.61542	9
9	NC	22	1.09257	3.60911	0.45167	668.08251	27.12407	9
9	NC	23	1.29752	3.82951	0.46229	681.31816	27.76183	9
9	NC	24	1.51300	4.06124	0.47558	695.23421	28.55993	10
9	NC	25	1.74205	4.30756	0.49230	710.02642	29.56402	10
9	NC	26	1.98882	4.57294	0.51381	725.96325	30.85575	10
9	NC	27	2.25950	4.86403	0.54212	743.44403	32.55585	10
9	NC	28	2.56379	5.19126	0.58094	763.09512	34.88710	10
9	NC	29	2.91873	5.57296	0.63730	786.01730	38.27168	10
9	NC	30	3.35852	6.04591	0.72838	814.41929	43.74129	10
9	NC	31	3.97196	6.70561	0.90664	854.03615	54.44631	10
9	NC	32	5.17187	7.99599	1.51142	931.52714	90.76507	10

TABLE K.17 Year 9 Calculator Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
9	CA	0	-5.23648	-3.19715	1.52840	259.34723	91.78477	5
9	CA	1	-4.01339	-1.88184	0.91770	338.33534	55.11050	5
9	CA	2	-3.38290	-1.20381	0.73670	379.05297	44.24093	5
9	CA	3	-2.93131	-0.71817	0.64332	408.21703	38.63320	5
9	CA	4	-2.56873	-0.32825	0.58492	431.63284	35.12611	5
9	CA	5	-2.25995	0.00381	0.54433	451.57399	32.68857	5
9	CA	6	-1.98719	0.29714	0.51449	469.18929	30.89659	5
9	CA	7	-1.74016	0.56279	0.49172	485.14233	29.52919	6
9	CA	8	-1.51224	0.80790	0.47398	499.86188	28.46385	6
9	CA	9	-1.29890	1.03732	0.45993	513.63920	27.62011	6
9	CA	10	-1.09677	1.25469	0.44880	526.69289	26.95172	6
9	CA	11	-0.90329	1.46276	0.44009	539.18809	26.42866	7
9	CA	12	-0.71638	1.66377	0.43343	551.25931	26.02871	7
9	CA	13	-0.53434	1.85953	0.42856	563.01525	25.73625	7
9	CA	14	-0.35567	2.05167	0.42529	574.55381	25.53988	7
9	CA	15	-0.17906	2.24160	0.42351	585.95964	25.43298	8
9	CA	16	-0.00328	2.43063	0.42314	597.31143	25.41076	8
9	CA	17	0.17282	2.62001	0.42414	608.68424	25.47081	8
9	CA	18	0.35040	2.81098	0.42652	620.15253	25.61374	8
9	CA	19	0.53064	3.00481	0.43032	631.79258	25.84194	8
9	CA	20	0.71478	3.20284	0.43562	643.68484	26.16022	9
9	CA	21	0.90419	3.40653	0.44257	655.91701	26.57759	9
9	CA	22	1.10045	3.61759	0.45138	668.59176	27.10665	9
9	CA	23	1.30540	3.83799	0.46239	681.82741	27.76784	9
9	CA	24	1.52135	4.07022	0.47607	695.77348	28.58936	10
9	CA	25	1.75133	4.31754	0.49314	710.62575	29.61446	10
9	CA	26	1.99942	4.58434	0.51497	726.64785	30.92541	10
9	CA	27	2.27173	4.87718	0.54353	744.23373	32.64052	10
9	CA	28	2.57791	5.20645	0.58253	764.00733	34.98258	10
9	CA	29	2.93497	5.59043	0.63903	787.06642	38.37557	10
9	CA	30	3.37717	6.06597	0.73051	815.62395	43.86920	10
9	CA	31	3.99373	6.72902	0.90881	855.44199	54.57663	10
9	CA	32	5.19768	8.02375	1.51452	933.19421	90.95124	10

TABLE K.18 Year 9 Reading Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
9	Reading	0	-5.32386	-3.16994	1.49630	208.55990	100.64573	5
9	Reading	1	-4.13354	-2.03568	0.88441	284.85370	59.48813	5
9	Reading	2	-3.54321	-1.47316	0.69897	322.69052	47.01487	5
9	Reading	3	-3.13610	-1.08522	0.60127	348.78456	40.44326	5
9	Reading	4	-2.82027	-0.78427	0.53910	369.02738	36.26152	5
9	Reading	5	-2.55932	-0.53561	0.49538	385.75301	33.32078	5
9	Reading	6	-2.33492	-0.32178	0.46286	400.13587	31.13338	5
9	Reading	7	-2.13654	-0.13274	0.43751	412.85128	29.42826	5
9	Reading	8	-1.95755	0.03782	0.41723	424.32367	28.06417	5
9	Reading	9	-1.79350	0.19414	0.40066	434.83823	26.94962	5
9	Reading	10	-1.64127	0.33920	0.38690	444.59541	26.02408	5
9	Reading	11	-1.49855	0.47520	0.37535	453.74319	25.24719	5
9	Reading	12	-1.36364	0.60375	0.36555	462.38986	24.58801	5
9	Reading	13	-1.23517	0.72617	0.35723	470.62420	24.02839	5
9	Reading	14	-1.11209	0.84346	0.35009	478.51349	23.54813	6
9	Reading	15	-0.99354	0.95642	0.34397	486.11152	23.13648	6
9	Reading	16	-0.87881	1.06575	0.33872	493.46539	22.78335	6
9	Reading	17	-0.76729	1.17202	0.33424	500.61344	22.48201	6
9	Reading	18	-0.65846	1.27572	0.33045	507.58862	22.22708	6
9	Reading	19	-0.55188	1.37728	0.32728	514.41986	22.01386	6
9	Reading	20	-0.44714	1.47709	0.32469	521.13338	21.83964	6
9	Reading	21	-0.34391	1.57545	0.32260	527.74938	21.69907	6
9	Reading	22	-0.24183	1.67273	0.32102	534.29273	21.59279	7
9	Reading	23	-0.14060	1.76919	0.31991	540.78092	21.51813	7
9	Reading	24	-0.03992	1.86513	0.31927	547.23414	21.47508	7
9	Reading	25	0.06046	1.96078	0.31909	553.66785	21.46297	7
9	Reading	26	0.16089	2.05648	0.31936	560.10493	21.48113	7
9	Reading	27	0.26161	2.15245	0.32010	566.56017	21.53091	7
9	Reading	28	0.36293	2.24900	0.32132	573.05442	21.61297	7
9	Reading	29	0.46515	2.34641	0.32304	579.60651	21.72866	7
9	Reading	30	0.56861	2.44499	0.32530	586.23730	21.88068	8
9	Reading	31	0.67367	2.54511	0.32814	592.97168	22.07170	8
9	Reading	32	0.78074	2.64713	0.33162	599.83386	22.30578	8
9	Reading	33	0.89026	2.75150	0.33581	606.85411	22.58761	8
9	Reading	34	1.00276	2.85870	0.34078	614.06471	22.92191	8
9	Reading	35	1.11885	2.96932	0.34667	621.50535	23.31809	8
9	Reading	36	1.23926	3.08406	0.35360	629.22311	23.78422	8
9	Reading	37	1.36485	3.20373	0.36176	637.27248	24.33309	9
9	Reading	38	1.49672	3.32939	0.37137	645.72476	24.97948	9
9	Reading	39	1.63620	3.46230	0.38287	654.66469	25.75301	9
9	Reading	40	1.78508	3.60417	0.39661	664.20730	26.67720	9
9	Reading	41	1.94570	3.75722	0.41325	674.50192	27.79646	9
9	Reading	42	2.12126	3.92451	0.43371	685.75436	29.17266	9
9	Reading	43	2.31633	4.11040	0.45938	698.25789	30.89931	10
9	Reading	44	2.53774	4.32138	0.49242	712.44905	33.12168	10

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
9	Reading	45	2.79637	4.56783	0.53687	729.02603	36.11152	10
9	Reading	46	3.11112	4.86775	0.60014	749.19957	40.36726	10
9	Reading	47	3.51944	5.25684	0.69940	775.37096	47.04379	10
9	Reading	48	4.11497	5.82432	0.88723	813.54140	59.67781	10
9	Reading	49	5.31670	6.96945	1.50396	890.56636	101.16096	10

TABLE K.19 Year 9 Spelling Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
9	Spelling	0	-5.20210	-2.01505	1.52274	387.36519	58.02904	5
9	Spelling	1	-3.98980	-0.83718	0.91667	432.25182	34.93274	5
9	Spelling	2	-3.36381	-0.22897	0.73869	455.42967	28.15022	5
9	Spelling	3	-2.91117	0.21082	0.64842	472.18932	24.71019	5
9	Spelling	4	-2.54313	0.56840	0.59284	485.81609	22.59213	6
9	Spelling	5	-2.22547	0.87704	0.55480	497.57784	21.14249	6
9	Spelling	6	-1.94123	1.15321	0.52713	508.10221	20.08803	6
9	Spelling	7	-1.68065	1.40639	0.50637	517.75047	19.29690	6
9	Spelling	8	-1.43770	1.64244	0.49020	526.74593	18.68069	6
9	Spelling	9	-1.20816	1.86546	0.47748	535.24485	18.19595	7
9	Spelling	10	-0.98899	2.07841	0.46746	543.36001	17.81411	7
9	Spelling	11	-0.77783	2.28357	0.45965	551.17831	17.51648	7
9	Spelling	12	-0.57279	2.48279	0.45373	558.77025	17.29088	7
9	Spelling	13	-0.37225	2.67763	0.44946	566.19527	17.12816	7
9	Spelling	14	-0.17481	2.86946	0.44673	573.50558	17.02412	7
9	Spelling	15	0.02085	3.05957	0.44544	580.75035	16.97496	7
9	Spelling	16	0.21598	3.24916	0.44558	587.97531	16.98030	8
9	Spelling	17	0.41181	3.43942	0.44716	595.22579	17.04051	8
9	Spelling	18	0.60960	3.63160	0.45025	602.54945	17.15826	8
9	Spelling	19	0.81074	3.82702	0.45500	609.99657	17.33928	8
9	Spelling	20	1.01674	4.02717	0.46163	617.62395	17.59194	8
9	Spelling	21	1.22945	4.23384	0.47051	625.49979	17.93034	8
9	Spelling	22	1.45114	4.44924	0.48217	633.70832	18.37468	8
9	Spelling	23	1.68489	4.67635	0.49737	642.36310	18.95393	9
9	Spelling	24	1.93493	4.91929	0.51753	651.62113	19.72219	9
9	Spelling	25	2.20763	5.18424	0.54476	661.71792	20.75988	9
9	Spelling	26	2.51318	5.48112	0.58289	673.03152	22.21295	9
9	Spelling	27	2.86937	5.82719	0.63916	686.21966	24.35730	10
9	Spelling	28	3.31175	6.25701	0.73077	702.59937	27.84841	10
9	Spelling	29	3.93088	6.85855	0.91070	725.52304	34.70523	10
9	Spelling	30	5.14188	8.03516	1.51946	770.36165	57.90404	10

TABLE K.20 Year 9 Grammar & Punctuation Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
9	GP	0	-4.88668	-4.01584	1.51602	112.73502	111.43109	5
9	GP	1	-3.68080	-2.71880	0.90908	208.07056	66.81955	5
9	GP	2	-3.06407	-2.05544	0.72977	256.82911	53.63984	5
9	GP	3	-2.62269	-1.58069	0.63835	291.72437	46.92025	5
9	GP	4	-2.26704	-1.19816	0.58198	319.84123	42.77692	5
9	GP	5	-1.96217	-0.87024	0.54355	343.94414	39.95222	5
9	GP	6	-1.69051	-0.57804	0.51597	365.42154	37.92503	5
9	GP	7	-1.44210	-0.31085	0.49528	385.06064	36.40426	5
9	GP	8	-1.21049	-0.06173	0.47964	403.37155	35.25469	5
9	GP	9	-0.99143	0.17389	0.46759	420.69019	34.36898	5
9	GP	10	-0.78177	0.39940	0.45842	437.26571	33.69497	5
9	GP	11	-0.57911	0.61738	0.45163	453.28776	33.19588	5
9	GP	12	-0.38147	0.82996	0.44690	468.91290	32.84822	5
9	GP	13	-0.18716	1.03896	0.44402	484.27490	32.63653	6
9	GP	14	0.00537	1.24605	0.44292	499.49651	32.55568	6
9	GP	15	0.19765	1.45286	0.44356	514.69754	32.60272	6
9	GP	16	0.39119	1.66104	0.44601	529.99926	32.78280	6
9	GP	17	0.58762	1.87232	0.45038	545.52885	33.10401	7
9	GP	18	0.78873	2.08863	0.45689	561.42815	33.58251	7
9	GP	19	0.99661	2.31223	0.46587	577.86329	34.24256	7
9	GP	20	1.21377	2.54580	0.47783	595.03124	35.12165	8
9	GP	21	1.44349	2.79289	0.49346	613.19294	36.27049	8
9	GP	22	1.69007	3.05811	0.51417	632.68725	37.79272	8
9	GP	23	1.95991	3.34835	0.54171	654.02058	39.81698	9
9	GP	24	2.26282	3.67416	0.58003	677.96839	42.63359	9
9	GP	25	2.61600	4.05404	0.63616	705.89048	46.75928	10
9	GP	26	3.05397	4.52512	0.72714	740.51599	53.44653	10
9	GP	27	3.66579	5.18320	0.90573	788.88644	66.57332	10
9	GP	28	4.86479	6.47284	1.51090	883.67806	111.05476	10

TABLE K.21 Years 3, 5, 7, and 9 Persuasive Writing Score Equivalence Table

Year	Domain	Raw Score	Delta-Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
3579	Writing	0	-12.539	-12.540	1.763	94.52478	52.30000	1
3579	Writing	1	-10.960	-10.960	1.078	141.43828	32.00000	1
3579	Writing	2	-10.075	-10.070	0.869	167.86425	25.80000	1
3579	Writing	3	-9.450	-9.450	0.770	186.27335	22.90000	1
3579	Writing	4	-8.933	-8.933	0.719	201.62416	21.30000	1
3579	Writing	5	-8.463	-8.463	0.694	215.57944	20.60000	1
3579	Writing	6	-8.008	-8.008	0.684	229.08934	20.30000	1
3579	Writing	7	-7.551	-7.551	0.685	242.65863	20.30000	1
3579	Writing	8	-7.083	-7.083	0.690	256.55453	20.50000	1
3579	Writing	9	-6.600	-6.600	0.695	270.89581	20.60000	2
3579	Writing	10	-6.110	-6.110	0.698	285.44494	20.70000	2
3579	Writing	11	-5.622	-5.622	0.698	299.93468	20.70000	2
3579	Writing	12	-5.136	-5.136	0.699	314.36503	20.80000	2
3579	Writing	13	-4.647	-4.647	0.702	328.88447	20.80000	3
3579	Writing	14	-4.151	-4.151	0.705	343.61175	20.90000	3
3579	Writing	15	-3.649	-3.649	0.705	358.51718	20.90000	3
3579	Writing	16	-3.146	-3.146	0.700	373.45230	20.80000	3
3579	Writing	17	-2.655	-2.655	0.690	388.03112	20.50000	4
3579	Writing	18	-2.185	-2.185	0.678	401.98640	20.10000	4
3579	Writing	19	-1.735	-1.735	0.666	415.34784	19.80000	4
3579	Writing	20	-1.300	-1.300	0.657	428.26390	19.50000	5
3579	Writing	21	-0.875	-0.875	0.650	440.88304	19.30000	5
3579	Writing	22	-0.457	-0.457	0.643	453.29434	19.10000	5
3579	Writing	23	-0.047	-0.047	0.637	465.46810	18.90000	5
3579	Writing	24	0.354	0.354	0.631	477.37463	18.70000	5
3579	Writing	25	0.747	0.747	0.626	489.04362	18.60000	6
3579	Writing	26	1.134	1.134	0.622	500.53446	18.50000	6
3579	Writing	27	1.516	1.516	0.620	511.87684	18.40000	6
3579	Writing	28	1.897	1.897	0.621	523.18952	18.40000	6
3579	Writing	29	2.280	2.280	0.624	534.56160	18.50000	7
3579	Writing	30	2.671	2.671	0.629	546.17120	18.70000	7
3579	Writing	31	3.071	3.071	0.634	558.04804	18.80000	7
3579	Writing	32	3.482	3.482	0.637	570.25149	18.90000	7
3579	Writing	33	3.894	3.894	0.636	582.48463	18.90000	8
3579	Writing	34	4.300	4.300	0.631	594.53962	18.70000	8
3579	Writing	35	4.694	4.694	0.625	606.23831	18.60000	8
3579	Writing	36	5.078	5.078	0.621	617.64007	18.40000	8
3579	Writing	37	5.456	5.456	0.620	628.86368	18.40000	8
3579	Writing	38	5.835	5.835	0.623	640.11699	18.50000	9
3579	Writing	39	6.222	6.222	0.631	651.60783	18.70000	9
3579	Writing	40	6.623	6.623	0.641	663.51436	19.00000	9
3579	Writing	41	7.042	7.042	0.653	675.95534	19.40000	9
3579	Writing	42	7.475	7.475	0.665	688.81202	19.70000	10
3579	Writing	43	7.920	7.920	0.680	702.02500	20.20000	10
3579	Writing	44	8.381	8.381	0.702	715.71306	20.90000	10

Year	Domain	Raw Score	Delta- Centered Logit	Logit	Logit SE	Scale Score	Scale SE	Band
3579	Writing	45	8.874	8.874	0.743	730.35126	22.10000	10
3579	Writing	46	9.436	9.436	0.820	747.03821	24.30000	10
3579	Writing	47	10.159	10.159	0.988	768.50560	29.30000	10
3579	Writing	48	11.461	11.461	1.599	807.16470	47.50000	10

APPENDIX L. VERTICAL LINK ITEM STATISTICS

Table L.1 Reading Year 3 to Year 5

Year 3						Year 5						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
r3q19	-1.074	0.039	0.93	74.48	1.16	r5q07	-2.221	0.030	0.87	91.16	1.13	Y
r3q20	1.720	0.041	1.06	23.45	0.82	r5q08	0.891	0.025	1.02	43.80	0.93	Y
r3q21	-0.467	0.036	0.91	64.03	1.26	r5q09	-1.788	0.029	0.87	87.56	1.15	N
r3q22	-0.283	0.036	0.94	60.57	1.20	r5q10	-1.531	0.028	0.85	84.95	1.20	N
r3q23	-1.143	0.040	0.91	75.64	1.16	r5q11	-2.064	0.030	0.94	90.02	1.06	Y
r3q24	0.504	0.036	0.97	45.07	1.07	r5q12	-0.769	0.026	0.89	74.77	1.21	Y
r3q25	0.310	0.035	1.07	48.94	0.80	r5q13	-0.442	0.026	1.03	69.38	0.95	Y
r3q26	2.033	0.041	1.28	19.19	0.46	r5q14	1.752	0.026	1.10	28.19	0.72	N
r3q27	0.715	0.036	1.04	41.06	0.87	r5q15	-0.219	0.025	0.98	65.43	1.06	Y
r3q28	0.264	0.036	1.01	49.98	0.96	r5q16	-0.528	0.026	0.95	70.88	1.10	Y
r3q29	1.716	0.040	1.10	23.70	0.77	r5q17	1.274	0.025	0.97	36.59	1.04	N
r3q30	1.841	0.040	1.08	21.90	0.77	r5q18	0.956	0.025	0.95	42.65	1.14	Y

Table L.2 Reading Year 5 to Year 7

Year 5						Year 7						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
r5q19	-0.443	0.026	1.11	69.48	0.75	r7q07	-1.174	0.036	1.01	78.60	0.99	Y
r5q20	0.724	0.025	1.07	47.24	0.81	r7q08	-0.330	0.032	1.04	63.88	0.90	Y
r5q21	1.110	0.025	1.17	39.73	0.55	r7q09	0.535	0.031	1.11	45.88	0.57	N
r5q22	0.346	0.025	1.02	54.74	0.96	r7q10	-0.639	0.033	0.96	69.79	1.11	Y
r5q23	-0.546	0.026	1.04	71.28	0.93	r7q11	-1.287	0.038	0.99	80.27	1.01	Y
r5q24	-0.154	0.025	0.97	64.34	1.10	r7q12	-0.875	0.034	0.94	73.92	1.13	Y
r5q25	-0.891	0.026	0.86	76.75	1.25	r7q13	-1.987	0.048	0.85	88.42	1.16	Y
r5q26	0.697	0.025	1.07	47.84	0.80	r7q14	-0.239	0.031	0.99	62.13	1.05	Y
r5q27	-0.385	0.025	0.89	68.57	1.26	r7q15	-1.734	0.044	0.84	85.87	1.19	N
r5q28	1.397	0.025	0.94	34.45	1.10	r7q16	0.120	0.031	0.88	54.73	1.44	N
r5q29	0.888	0.025	0.94	44.10	1.17	r7q17	-0.628	0.033	0.85	69.63	1.36	N
r5q30	1.840	0.026	1.08	26.88	0.81	r7q18	0.829	0.031	1.06	39.82	0.80	Y
r5q31	0.705	0.025	0.96	47.71	1.11	r7q19	-0.625	0.033	0.88	69.60	1.31	N

Table L.3 Reading Year 7 to Year 9

Year 7						Year 9						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
r7q32	-0.574	0.033	0.97	68.73	1.07	r9q07	-1.141	0.040	0.99	79.14	1.01	Y
r7q33	1.323	0.033	0.99	30.26	0.99	r9q08	0.473	0.034	0.99	49.33	1.05	N
r7q34	0.465	0.031	1.01	47.53	0.99	r9q09	-0.133	0.035	1.05	61.70	0.85	Y
r7q35	-1.068	0.036	0.92	77.21	1.14	r9q10	-2.010	0.054	0.91	89.15	1.10	N
r7q36	0.784	0.031	1.14	40.84	0.49	r9q11	0.396	0.034	1.04	50.94	0.85	Y
r7q37	-0.016	0.031	1.10	57.74	0.66	r9q12	-0.191	0.035	1.06	62.84	0.86	N
r7q38	1.922	0.036	1.04	20.42	0.89	r9q19	1.375	0.036	1.02	31.48	0.93	Y
r7q39	0.083	0.031	1.00	55.67	0.99	r9q20	-0.480	0.036	1.03	68.35	0.92	Y
r7q40	1.190	0.032	0.97	32.79	1.04	r9q21	0.532	0.034	0.89	48.18	1.35	Y
r7q41	1.644	0.034	1.09	24.72	0.76	r9q22	1.193	0.036	1.08	34.91	0.77	Y
r7q42	1.012	0.032	0.99	36.26	1.01	r9q23	0.666	0.034	1.02	45.44	0.92	Y
r7q43	0.205	0.031	0.97	53.13	1.14	r9q24	-0.600	0.037	0.92	70.55	1.18	Y
r7q44	0.929	0.032	1.02	37.94	0.89	r9q25	0.685	0.034	0.98	45.05	1.06	N

Table L.4 Spelling Year 3 to Year 5

Year 3						Year 5						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
<u>2013</u>												
lc3q10	0.010	0.042	1.16	51.12	0.75	lc5q03	-1.641	0.042	1.15	72.99	0.76	Y
lc3q14	1.807	0.045	1.09	27.23	0.83	lc5q08	-0.576	0.039	1.01	59.47	1.01	Y
lc3q16	0.034	0.042	0.99	51.44	1.06	lc5q13	-2.082	0.047	0.93	78.61	1.08	Y
lc3q18	1.021	0.043	0.87	37.98	1.24	lc5q14	-0.959	0.040	0.88	65.24	1.21	Y
lc3q19	0.788	0.042	1.04	41.37	0.96	lc5q16	-0.393	0.038	1.01	57.57	1.03	N
lc3q23	2.342	0.049	0.95	22.48	1.08	lc5q18	0.403	0.038	0.99	46.02	1.07	Y
<u>2012</u>												
lc3q11	-0.026	0.041	1.01	52.28	1.02	lc5q03	-1.518	0.041	1.02	71.09	0.96	N
lc3q15	-1.260	0.044	0.98	70.05	1.04	lc5q13	-3.354	0.058	0.96	89.48	0.99	Y
lc3q19	0.449	0.041	0.85	45.98	1.28	lc5q15	-1.818	0.044	0.90	75.52	1.16	N
lc3q22	1.546	0.044	1.17	30.81	0.71	lc5q18	-0.930	0.039	1.09	64.05	0.85	Y
lc3q23	2.740	0.053	0.94	17.38	1.06	lc5q20	0.256	0.038	0.95	45.97	1.13	N

Table L.5 Spelling Year 5 to Year 7

Year 5						Year 7						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
<u>2013</u>												
lc5q07	-0.728	0.039	1.14	61.58	0.79	lc7q01	-2.578	0.048	1.04	82.93	0.89	Y
lc5q09	0.463	0.038	1.13	44.35	0.81	lc7q06	-0.947	0.037	1.08	63.31	0.88	Y
lc5q11	1.452	0.040	0.96	30.79	1.05	lc7q10	-0.015	0.035	0.90	48.81	1.23	Y
lc5q19	0.404	0.038	0.92	46.10	1.19	lc7q19	-1.464	0.039	0.88	71.28	1.17	Y
lc5q22	1.785	0.042	0.97	27.64	1.04	lc7q23	-0.089	0.035	0.89	50.91	1.26	Y
<u>2012</u>												
lc5q05	-1.215	0.040	0.92	67.03	1.15	lc7q02	-2.893	0.065	0.86	84.71	1.09	Y
lc5q08	-0.271	0.038	0.99	53.09	1.05	lc7q04	-1.476	0.050	1.03	68.81	0.94	N
lc5q09	0.811	0.039	0.95	36.47	1.11	lc7q05	-1.683	0.051	0.90	71.64	1.14	N
lc5q12	1.441	0.041	1.03	27.72	0.96	lc7q08	0.194	0.045	1.14	43.12	0.76	N
lc5q22	1.394	0.041	0.92	29.2	1.15	lc7q20	-0.390	0.045	0.98	53.07	1.05	Y
lc5q23	1.843	0.044	0.97	23.51	1.04	lc7q23	-0.213	0.045	0.97	50.43	1.08	N

Table L.6 Spelling Year 7 to Year 9

Year 7						Year 9						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
<u>2013</u>												
lc7q07	-1.249	0.037	1.18	67.71	0.68	lc9q04	-1.624	0.044	1.24	74.64	0.55	N
lc7q12	0.461	0.035	1.09	41.18	0.82	lc9q09	0.341	0.038	1.01	44.43	0.99	N
lc7q13	0.910	0.036	1.01	34.21	1.00	lc9q10	0.356	0.038	1.01	44.18	0.99	Y
lc7q14	1.580	0.039	1.03	24.80	0.97	lc9q13	0.596	0.039	1.01	40.30	1.01	Y
lc7q17	-1.832	0.041	0.88	75.53	1.14	lc9q17	-2.870	0.060	0.89	87.84	1.06	Y
lc7q21	-0.083	0.035	1.01	50.65	1.02	lc9q20	-0.741	0.040	0.96	63.07	1.09	Y
lc7q29	2.022	0.043	1.04	20.47	0.94	lc9q27	1.183	0.041	1.07	32.70	0.91	Y
<u>2012</u>												
lc7q06	-0.747	0.046	1.09	58.15	0.83	lc9q03	-1.547	21.07	1.05	71.52	0.88	Y
lc7q09	0.347	0.046	1.02	40.69	1.00	lc9q08	-0.176	25.01	1.03	50.30	0.95	Y
lc7q11	1.058	0.049	0.91	30.04	1.16	lc9q09	0.074	37.74	0.93	46.17	1.16	N
lc7q12	1.532	0.050	0.99	23.75	1.01	lc9q11	0.554	15.69	0.98	38.34	1.05	Y
lc7q13	1.529	0.050	1.08	23.79	0.87	lc9q12	0.912	32.27	1.15	32.87	0.74	Y
lc7q16	-1.368	0.049	0.95	67.88	1.08	lc9q18	-2.214	25.76	0.93	80.61	1.06	Y
lc7q17	-1.039	0.047	1.05	63.16	0.95	lc9q19	-1.952	25.67	1.08	77.84	0.88	Y

Table L.7 Grammar and Punctuation Year 3 to Year 5

Year 3						Year 5						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
<u>2013</u>												
lc3q31	-0.054	0.035	0.97	61.43	1.10	lc5q28	-0.866	0.039	0.98	79.31	1.04	Y
lc3q32	-1.417	0.046	0.93	83.85	1.11	lc5q32	-1.444	0.046	1.00	86.28	0.99	N
lc3q39	-0.003	0.035	0.96	60.57	1.15	lc5q35	-0.942	0.040	1.01	80.51	1.00	Y
lc3q45	0.797	0.035	1.04	44.25	0.86	lc5q40	0.117	0.034	1.00	63.31	0.99	Y
lc3q47	1.607	0.038	1.06	28.57	0.83	lc5q45	0.930	0.033	0.97	47.51	1.09	Y
<u>2012</u>												
lc3q32	-0.537	0.037	0.98	67.19	1.04	lc5q30	-1.202	0.043	0.97	83.75	1.03	Y
lc3q38	-0.285	0.037	0.99	62.81	1.05	lc5q34	-0.869	0.040	0.94	79.43	1.11	Y
lc3q44	0.483	0.036	0.95	48.04	1.18	lc5q36	-0.623	0.038	0.89	75.76	1.23	N
lc3q49	1.172	0.038	0.98	34.86	1.03	lc5q42	0.545	0.033	1.01	54.03	0.96	Y
lc3q50	0.945	0.037	1.06	39.31	0.82	lc5q44	0.317	0.033	1.02	58.80	0.95	Y

Table L.8 Grammar and Punctuation Year 5 to Year 7

Year 5						Year 7						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
<u>2013</u>												
lc5q39	0.050	0.034	0.95	64.56	1.15	lc7q38	-0.980	0.037	0.92	78.85	1.13	Y
lc5q41	0.468	0.033	1.02	56.53	0.98	lc7q42	-0.309	0.033	0.96	67.70	1.13	Y
lc5q42	0.287	0.033	0.97	60.19	1.11	lc7q43	-0.279	0.033	0.97	67.16	1.10	Y
lc5q44	0.496	0.033	0.94	56.17	1.20	lc7q44	-0.682	0.035	0.92	74.31	1.19	N
lc5q46	1.264	0.034	1.04	40.89	0.86	lc7q45	0.714	0.031	1.02	46.90	0.92	Y
lc5q47	1.403	0.034	1.14	38.21	0.59	lc7q49	0.803	0.031	1.04	45.08	0.82	Y
lc5q50	1.900	0.036	1.11	29.29	0.71	lc7q54	1.559	0.034	1.07	30.19	0.79	N
<u>2012</u>												
lc5q35	-0.743	0.038	0.99	77.61	1.0	lc7q34	-1.585	0.056	1.02	86.78	0.97	Y
lc5q39	0.553	0.033	1.09	53.68	0.7	lc7q43	-0.146	0.042	1.06	65.68	0.87	Y
lc5q43	0.488	0.033	0.99	55.24	1.1	lc7q44	-0.546	0.044	0.95	72.81	1.14	Y
lc5q46	1.050	0.033	1.01	43.60	1.0	lc7q47	0.070	0.041	0.99	61.63	1.04	Y
lc5q47	1.341	0.034	1.00	37.71	1.0	lc7q51	0.298	0.041	0.98	57.16	1.07	Y

Table L.9 Grammar and Punctuation Year 7 to Year 9

Year 7						Year 9						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
<u>2013</u>												
lc7q37	-1.124	0.038	0.94	80.88	1.08	lc9q33	-1.718	0.058	0.93	90.63	1.08	Y
lc7q40	-0.220	0.033	0.97	65.99	1.09	lc9q39	-0.265	0.038	1.02	72.70	0.98	Y
lc7q46	0.651	0.031	1.12	48.24	0.53	lc9q43	0.710	0.034	1.13	53.85	0.54	N
lc7q50	0.350	0.031	1.02	54.64	0.95	lc9q44	0.469	0.035	1.05	58.84	0.83	Y
lc7q51	0.907	0.031	1.00	42.94	1.02	lc9q52	0.286	0.035	0.92	62.67	1.25	Y
lc7q55	1.465	0.033	1.05	31.93	0.83	lc9q54	1.352	0.035	1.04	40.63	0.83	Y
<u>2012</u>												
lc7q33	-1.279	0.050	1.06	83.32	0.90	lc9q31	-1.672	0.061	1.04	89.89	0.94	Y
lc7q35	-1.274	0.051	0.96	83.30	1.05	lc9q32	-1.318	0.055	0.97	86.59	1.05	Y
lc7q48	0.387	0.041	0.93	55.32	1.26	lc9q42	-0.103	0.042	0.86	69.40	1.34	N
lc7q50	0.303	0.041	1.03	57.04	0.91	lc9q43	0.014	0.042	1.02	67.33	0.95	Y
lc7q54	1.269	0.042	1.09	37.67	0.70	lc9q44	1.150	0.040	1.06	44.76	0.80	Y
lc7q56	1.733	0.044	0.99	29.26	0.97	lc9q55	1.054	0.040	0.98	46.83	1.05	N
lc7q57	1.772	0.044	1.07	28.60	0.79	lc9q57	1.958	0.044	0.99	29.61	0.98	N

Table L.10 Numeracy Year 3 to Year 5

Year 3						Year 5						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
n3q13	-0.450	0.036	0.98	61.12	1.07	n5q03	-1.741	0.041	0.90	80.81	1.17	Y
n3q14	-0.522	0.036	1.01	62.52	1.00	n5q04	-1.792	0.042	0.92	81.48	1.13	Y
n3q15	-0.566	0.036	1.01	63.34	0.98	n5q05	-1.787	0.040	0.98	81.41	1.02	Y
n3q16	-0.050	0.035	0.88	53.29	1.38	n5q06	-1.461	0.038	0.88	76.84	1.23	Y
n3q18	-0.202	0.035	0.97	56.30	1.13	n5q07	-1.673	0.040	0.90	79.90	1.16	Y
n3q22	0.585	0.036	1.05	40.76	0.83	n5q08	-1.018	0.036	0.86	69.63	1.33	Y
n3q26	0.998	0.037	1.11	33.03	0.71	n5q18	0.075	0.033	1.06	48.58	0.83	N
n3q27	0.964	0.036	1.27	33.68	0.26	n5q19	0.237	0.033	1.07	45.35	0.80	N
n3q29	1.091	0.038	1.07	31.45	0.78	n5q21	-0.348	0.033	1.02	57.06	0.94	Y
n3q32	2.484	0.054	0.87	12.60	1.16	n5q26	0.082	0.033	0.83	48.45	1.53	N
n3q33	3.675	0.074	1.02	4.78	0.97	n5q36	2.316	0.048	0.91	13.10	1.08	Y

Table L.11 Numeracy Year 5 to Year 7

Year 5						Year 7						Retained
Label	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil	Disc	
n5q01	-3.420	0.070	0.97	95.04	1.03	n7NCq01	-3.647	0.068	0.97	95.13	1.02	N
n5q02	-2.500	0.050	1.02	89.14	0.97	n7NCq02	-3.378	0.058	1.00	93.80	0.98	Y
n5q13	-1.311	0.036	1.02	74.53	0.96	n7NCq06	-1.773	0.036	1.06	78.23	0.86	N
n5q23	0.438	0.033	0.97	41.39	1.07	n7NCq10	-0.827	0.032	0.97	62.08	1.08	Y
n5q24	0.180	0.033	1.13	46.49	0.60	n7NCq11	-0.810	0.032	1.06	61.76	0.85	Y
n5q30	0.494	0.033	1.14	40.37	0.60	n7NCq14	-0.639	0.032	0.96	58.44	1.12	Y
n5q31	0.636	0.034	1.12	37.66	0.64	n7NCq15	-0.219	0.032	1.04	50.12	0.87	Y
n5q33	0.864	0.035	1.08	33.45	0.76	n7NCq17	-0.083	0.032	0.96	47.42	1.12	Y
n5q34	1.369	0.038	0.94	24.98	1.08	n7NCq18	0.066	0.032	0.87	44.47	1.37	Y
n5q35	1.304	0.037	0.95	26.02	1.08	n7NCq23	0.247	0.032	0.98	40.98	1.07	Y
n5q37	2.264	0.048	0.93	13.62	1.08	n7NCq24	1.368	0.038	0.91	22.11	1.11	Y
n5q40	3.209	0.069	0.92	6.46	1.11	n7NCq28	1.969	0.044	0.86	14.82	1.15	N

Table L.12 Numeracy Year 7 to Year 9

Label	Year 7					Year 9					Retained	
	Locn	SE	Infit	Facil	Disc	Label	Locn	SE	Infit	Facil		Disc
n7CAq03	-1.187	0.033	1.06	68.66	0.83	n9CAq05	-1.132	0.040	1.04	78.20	0.92	Y
n7CAq17	0.101	0.032	1.00	43.72	0.98	n9CAq12	0.264	0.035	0.95	53.61	1.14	Y
n7CAq20	0.349	0.032	1.03	38.98	0.88	n9CAq13	0.181	0.035	0.93	55.25	1.21	Y
n7CAq21	0.460	0.033	1.07	36.91	0.82	n9CAq15	0.676	0.036	1.05	45.65	0.85	Y
n7CAq23	0.640	0.034	1.01	33.70	0.95	n9CAq17	0.437	0.035	0.96	50.34	1.09	Y
n7CAq27	1.777	0.043	0.89	17.03	1.12	n9CAq22	1.527	0.038	0.89	30.37	1.18	Y
n7CAq28	2.017	0.045	1.05	14.43	0.92	n9CAq24	2.464	0.045	1.00	17.32	0.97	N
n7CAq29	1.815	0.044	0.88	16.59	1.13	n9CAq25	1.059	0.037	0.86	38.59	1.31	N
n7NCq03	-2.072	0.040	0.93	82.29	1.09	n9NCq02	-1.888	0.052	0.94	87.39	1.06	Y
n7NCq05	-1.507	0.036	0.85	74.14	1.31	n9NCq03	-1.466	0.047	0.84	82.72	1.23	Y
n7NCq08	-0.812	0.032	0.91	61.79	1.27	n9NCq04	-1.287	0.044	0.87	80.41	1.20	N
n7NCq12	-0.799	0.032	1.03	61.56	0.92	n9NCq09	-0.463	0.037	1.01	67.40	0.99	Y
n7NCq19	-0.025	0.032	0.90	46.26	1.27	n9NCq10	0.229	0.035	0.91	54.33	1.27	Y
n7NCq21	-0.059	0.032	1.08	46.94	0.77	n9NCq15	0.367	0.035	1.11	51.62	0.70	N
n7NCq27	2.476	0.048	1.04	10.20	0.92	n9NCq24	2.003	0.042	0.86	23.07	1.16	N
n7NCq29	2.156	0.045	1.02	12.97	0.94	n9NCq27	2.309	0.045	0.93	19.09	1.04	Y
n7NCq32	3.297	0.070	0.97	5.38	1.06	n9NCq31	3.349	0.059	0.95	9.48	1.05	Y