NAPLAN NATIONAL ASSESSMENT PROGRAM Literacy and Numeracy

acara AUSTRALIAN CURRICULUM, ASSESSMENT AND REPORTING AUTHORITY

YEAR 9

Example test

NUMERACY
NON-CALCULATOR

SESSION 2

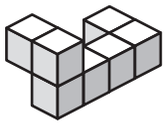
0:40

Time available for students to complete test: 40 minutes

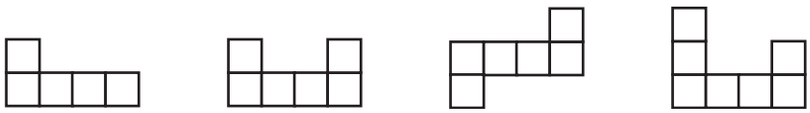
Use 2B or HB pencil only

YEAR 9 NUMERACY (NON-CALCULATOR)

1 Seven cubes are joined to form the following object.

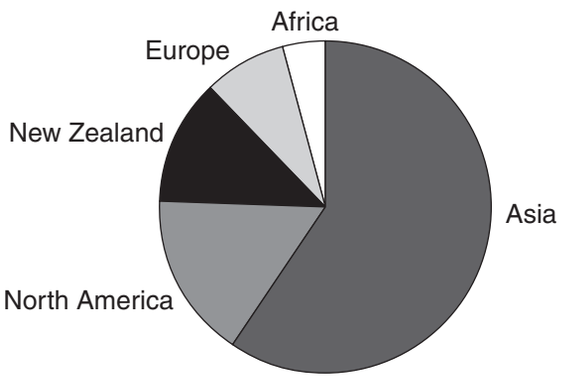


What will the shape look like from above?



○ ○ ○ ○

2 The diagram shows the proportion of flights to different international regions for an airline.



One region makes up about 60% of the airline's flights.

Which region is it?

Asia	Europe	North America	New Zealand
○	○	○	○

3 Tanya recorded temperatures on a mountain over four days.

Which list gives four temperatures arranged in order from lowest to highest?

○ 0 °C, −3 °C, 4 °C, −5 °C

○ −3 °C, −5 °C, 0 °C, 4 °C

○ −5 °C, 4 °C, −3 °C, 0 °C

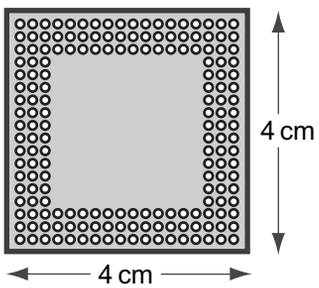
○ −5 °C, −3 °C, 0 °C, 4 °C

4 Steven cuts his birthday cake into 8 equal slices.

He eats 25% of the cake in whole slices.

How many slices of cake are left? ____

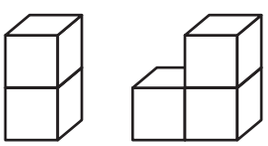
5 A computer chip has dimensions 8 mm × 8 mm.
A scale drawing is shown below.



What scale is used in the drawing?

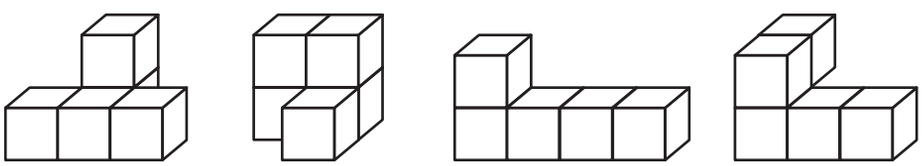
- ⬭ 1 cm represents 5 mm
- ⬭ 1 cm represents 2 mm
- ⬭ 2 cm represents 1 mm
- ⬭ 5 cm represents 1 mm

6 Kevin made these 2 objects by gluing cubes together face-to-face.



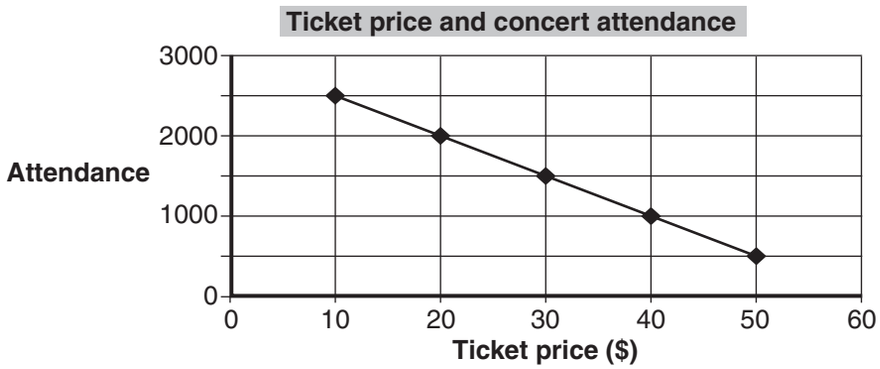
He then joined the 2 objects together.

Which object below could **not** be made using Kevin's 2 objects?



⬭ ⬭ ⬭ ⬭

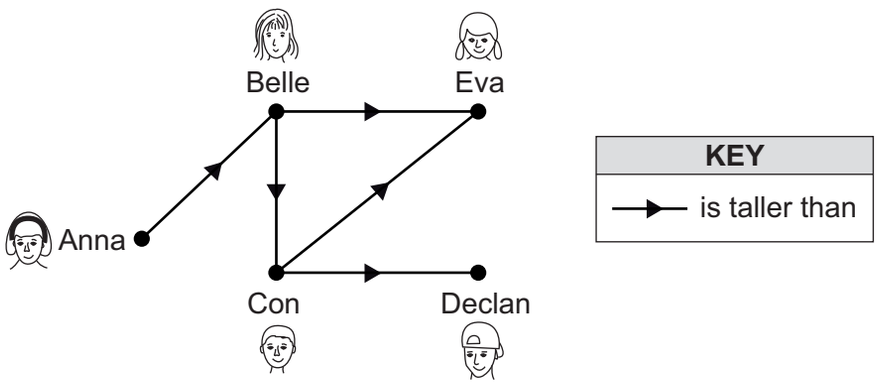
7 Jack drew this graph to show how attendance at concerts is related to ticket price.



Which statement best describes the graph?

- ⬭ As the ticket price goes up, attendance goes down.
- ⬭ As the ticket price goes up, attendance goes up.
- ⬭ As the ticket price goes down, attendance goes down.
- ⬭ As the ticket price goes down, attendance stays the same.

8 Five students compared their heights. This diagram shows their results.



Which student is the tallest?

Anna	Belle	Con	Declan	Eva
⬭	⬭	⬭	⬭	⬭

9 Claire thinks of a number, n.
She multiplies the number by itself.
She then halves that answer and subtracts 10.

Which expression shows what Claire did?

$\frac{2n-10}{2}$ $\quad$ $\frac{2n}{2}-10$ $\quad$ $\frac{n^2}{2}-10$ $\quad$ $\frac{n^2-10}{2}$

10 Helen has 24 red apples and 12 green apples.

What fraction of the apples are green?

$\frac{1}{2}$ $\quad$ $\frac{1}{3}$ $\quad$ $\frac{1}{4}$ $\quad$ $\frac{1}{12}$

11 Elli was playing a video game.
In the game she had to collect objects that are worth points.
The pictures show how many points she scored in three games.

Game 1	Game 2	Game 3
		
170 points	150 points	120 points

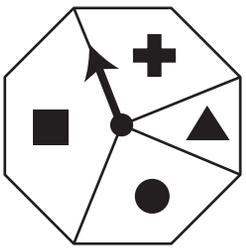
In Game 4 she collected these three objects: 

How many points did she score in Game 4?

12 Which of these is the longest distance?

0.1203 km $\quad$ 123 m $\quad$ 1230 cm $\quad$ 12 030 mm

13 Voula spins the arrow 100 times.



Which table is most likely to show her results?

Shape section	Number of spins
✚	15
▲	10
●	15
■	60

Shape section	Number of spins
✚	10
▲	25
●	25
■	40

Shape section	Number of spins
✚	25
▲	10
●	25
■	40

Shape section	Number of spins
✚	25
▲	25
●	25
■	25

14 A copier prints 1200 leaflets.
One-third of the leaflets are on yellow paper and the rest are on blue paper.
There are smudges on 5% of the blue leaflets.

How many blue leaflets have smudges?

40 60 400 800

15 Sally has seen four movies.
The ticket prices were $13, $8, $10 and $10.
The next movie she plans to see is in 3D and the ticket price is $34.

Which of these will **not** change after Sally sees the next movie?

- the median of her ticket prices
- the mean of her ticket prices
- the range of her ticket prices
- the total cost of her tickets

16 In a gym class, 29 students took turns jumping.

Pete recorded the height each student jumped.

Height (cm)

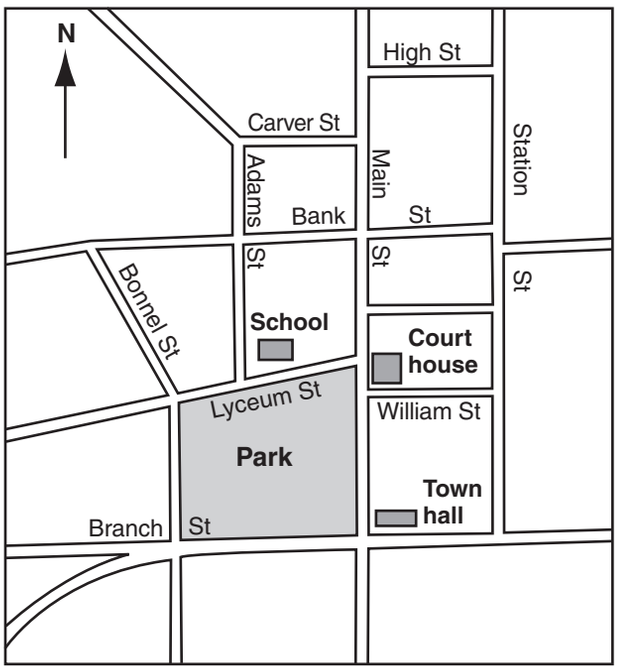
3	2 4
4	1 5 6
5	2 4 4 8 9
6	1 1 3 4 5 6 6 8 9
7	2 2 5 7 8
8	3 5 5
9	1 2

Key: 5 | 2 means 52

What is the median height?

63 cm ⬭ 64 cm ⬭ 65 cm ⬭ 66 cm ⬭

17 Jill lives in a street that runs directly north–south.
Her house is north of the park and west of the school.



What street does Jill live in?

Adams St ⬭ Bonnel St ⬭ Station St ⬭ Main St ⬭

18 Which one of the following expressions is equivalent to $2(5m + 1)$?

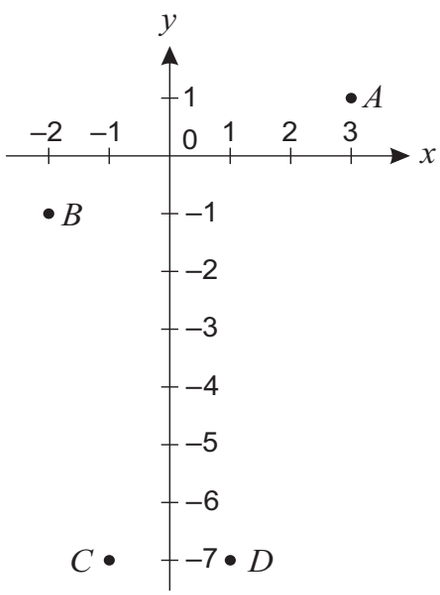
$7m + 1$ ⬭ $10m + 1$ ⬭ $10m + 2$ ⬭ $12m$ ⬭

19 Jade buys a 500 gram bag of beads at a market.
Each bead has a mass of 0.48 grams.

Which of these is the best estimate for the number of beads in the 500 gram bag?

100 ⬭ 250 ⬭ 1000 ⬭ 2500 ⬭

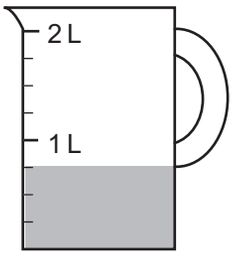
20 The graph of $y = 2x - 5$ will be drawn on this grid.



Which two points will the straight line pass through?

A and *B* ⬭ *B* and *C* ⬭ *B* and *D* ⬭ *A* and *C* ⬭

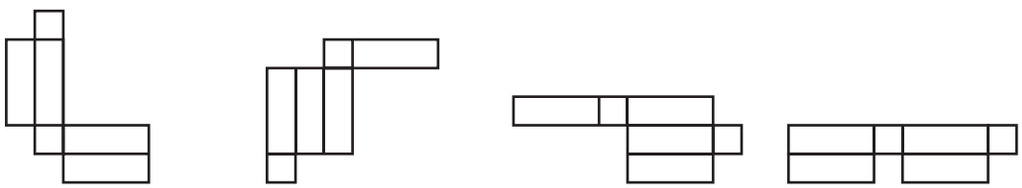
21 This jug has some milk in it.



If Eve adds an extra 500 mL of milk to the jug,
how many millilitres (mL) of milk will then be in the jug?

_____ mL

22



P Q R S

Only two of these nets form a closed rectangular prism.

Which two nets are they?

- ⬭ P and R
- ⬭ P and Q
- ⬭ Q and R
- ⬭ R and S

23 The height of a door is 210 cm.

Darren is $\frac{5}{6}$ of the height of the door.

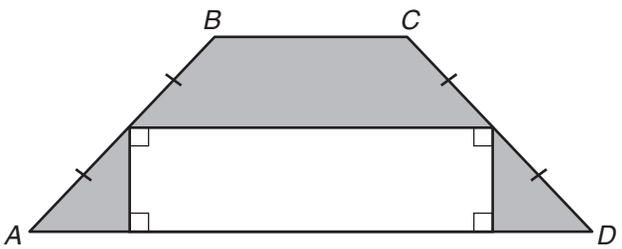
What is Darren's height?

_____ cm

24 $5b - 4 = 2b + 17$

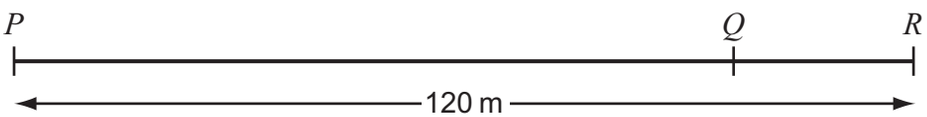
What is the value of b in this equation? $b =$ ____

25 The area of the rectangle in this diagram below is 10 cm^2.



What is the area of the trapezium $ABCD$? ____ cm^2

26



The distance from P to Q is four times the distance from Q to R.
The distance from P to R is 120 metres.

What is the distance from Q to R?

15 metres ○ 20 metres ○ 24 metres ○ 30 metres ○

27 In February 2010, the population of the world was approximately 6 800 000 000 people.

Another way of writing this number is

6.8×10^8 ○ 6.8×10^9 ○ 68×10^9 ○ 68×10^{10} ○

28

A number of students were asked this question:

"How many cousins do you have?"

The lowest answer given was 6.
The highest answer given was 20.
The total of all the answers given was 50.

What is the smallest number of students who could have been asked?

29

A ticket costs $75.

A fee of 10% is added to the price.

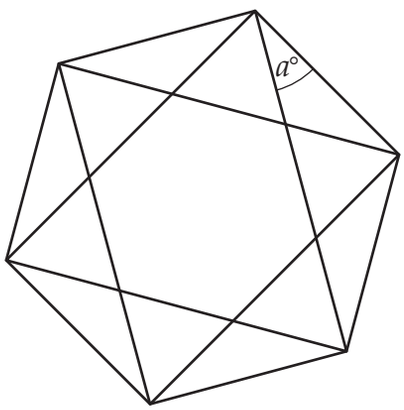
Which calculation will give the new price?

75 + 10 ⬭ 75 + 0.1 ⬭ 75 × 0.1 ⬭ 75 × 1.1 ⬭

30

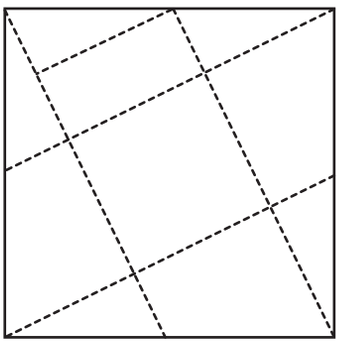
This design is drawn inside a regular hexagon.

What is the size of the angle marked a ?



degrees

31 The entire top of a square table is tiled with triangular tiles like this one.



Altogether, how many triangular tiles are used? ____

32 The height (h metres) and age (a years) of a tree are related by the following inequality:

$h < 4a - 3$ for values of a between 1 and 10

Which pair of values satisfy this inequality?

- ⬭ $h = 2$ and $a = 1$
- ⬭ $h = 6$ and $a = 2$
- ⬭ $h = 10$ and $a = 3$
- ⬭ $h = 20$ and $a = 6$

STOP – END OF TEST