

Test 3: Non-calculator



Instructions

- A correct answer scores 1 mark, and an incorrect answer scores 0.
- Marks are not deducted for incorrect answers.
- No marks are given if more than one answer alternative is shaded.
- Choose the alternative which most correctly answers the question and shade in the box next to it.

QUESTION 1

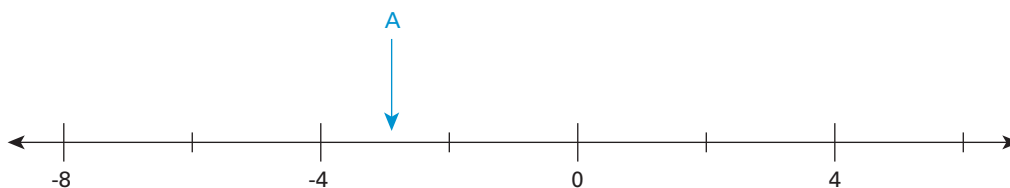
$$3x \times 4x = ?$$

☐ $7x$ ☐ $12x$ ☐ $7x^2$ ☒ $12x^2$

SHADE ONE BOX

QUESTION 2

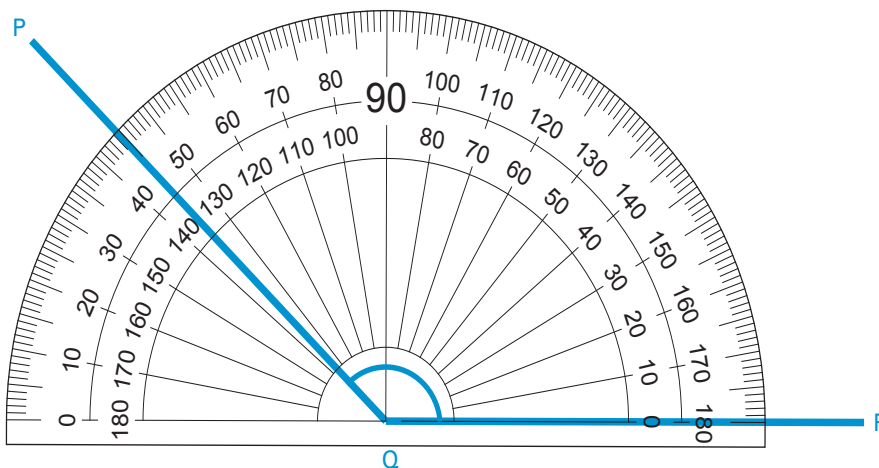
The arrow points to a position on the number line. What number is represented by A?



-3

QUESTION 3

What is the size of angle PQR?



135°

QUESTION 4SHADE ONE BOX 

How many hours and minutes are between 11.25 a.m. and 1.14 p.m. on the same day?

- ☐ 1 hour 14 minutes
☒ 1 hour 49 minutes
☐ 2 hour 14 minutes
☐ 2 hour 49 minutes

QUESTION 5SHADE ONE BOX 

Which letter does not have a line of symmetry?

- ☐ **B** ☒ **P** ☐ **M** ☐ **V**

QUESTION 6SHADE ONE BOX 

Henry has 18 orange flowers and 12 pink flowers. What fraction of the flowers is pink?

- ☐ $\frac{2}{3}$ ☒ $\frac{2}{5}$ ☐ $\frac{3}{8}$ ☐ $\frac{3}{10}$

QUESTION 7 **WRITE YOUR OWN ANSWER**

How many vertices does a cube have?

vertices

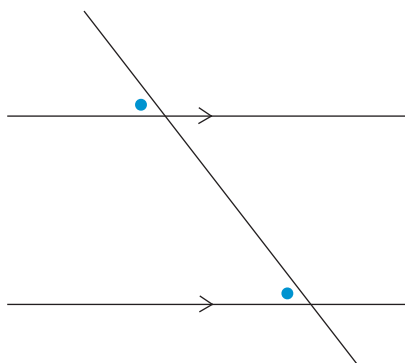
QUESTION 8SHADE ONE BOX 

$1.4 \times 0.6 = ?$

- ☐ 84 ☐ 8.4 ☒ 0.84 ☐ 0.084

QUESTION 9SHADE ONE BOX 

What type of angles are these?

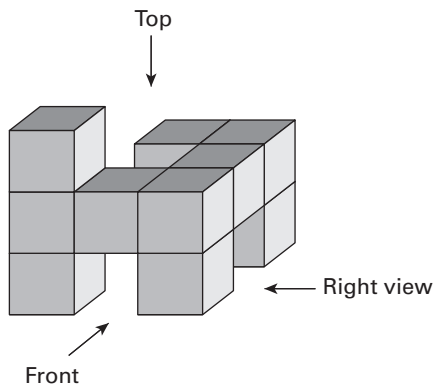


- ☐ cointerior
☐ alternate
☐ scalene
☒ corresponding

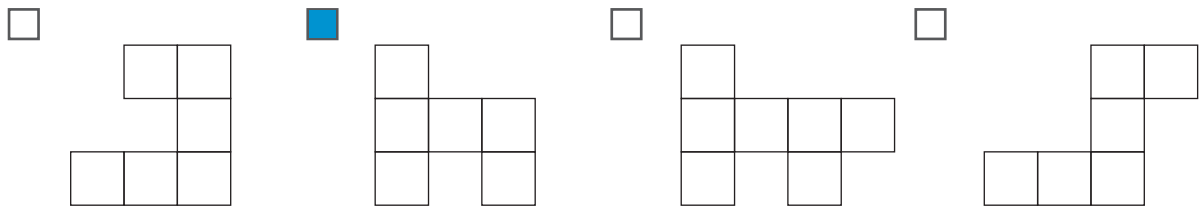
QUESTION 10

SHADE ONE BOX

This object was made using identical cubes.



Which drawing shows the view from the right side?

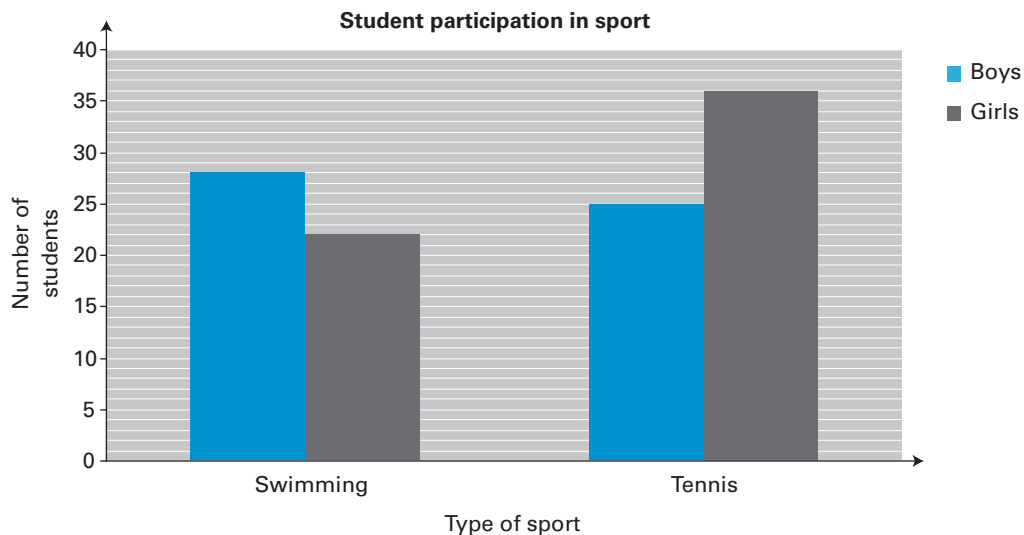


QUESTION 11



WRITE YOUR OWN ANSWER

This graph shows which students participate in swimming and tennis in Year 9.



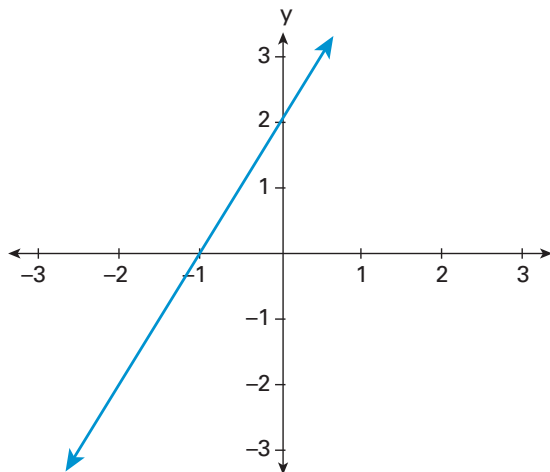
Use the information in the graph to complete this table.

	Swimming	Tennis
Boys	28	25
Girls	22	36

QUESTION 12

SHADE ONE BOX

Which one of the following represents the equation of the graph below?



☒ $y = 2x + 2$

☐ $y = 2x - 1$

☐ $y = x + 2$

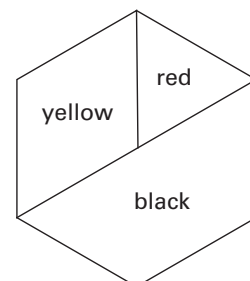
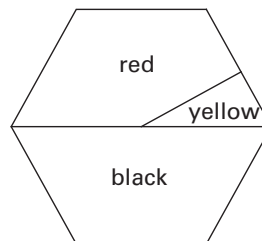
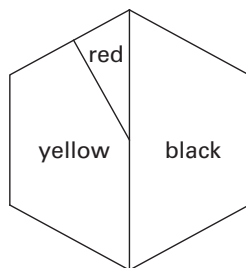
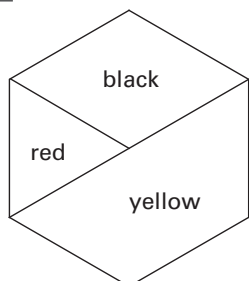
☐ $y = x - 1$

QUESTION 13

SHADE ONE BOX

A spinner is in the shape of a regular hexagon. Each section is labelled black, yellow or red. Which spinner below shows the following probabilities?

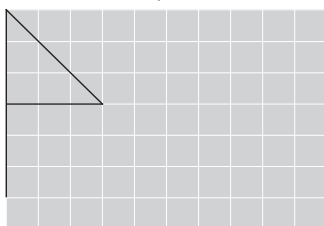
Probability of landing on black = $\frac{1}{2}$
 Probability of landing on yellow = $\frac{1}{3}$
 Probability of landing on red = $\frac{1}{6}$



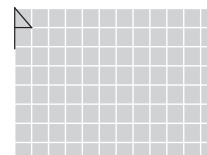
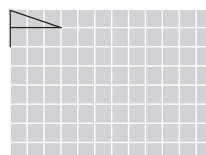
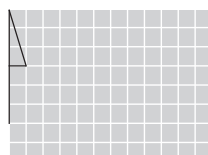
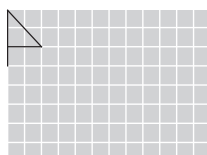
QUESTION 14

SHADE ONE BOX

Look at the object shown below



Which diagram below shows the same object multiplied by a scale factor of $\frac{1}{3}$?

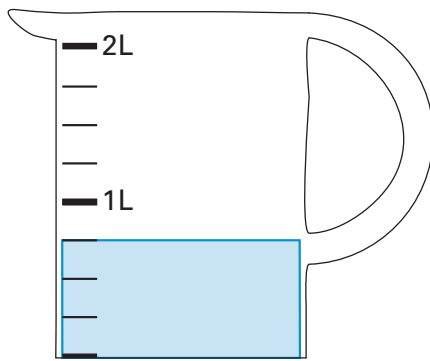


QUESTION 15

This jug contains some orange juice.



WRITE YOUR OWN ANSWER



If an extra 800 mL of orange juice is added to the jug, how many litres of orange juice will then be in the jug?

1.55 litres

QUESTION 16

$$\frac{5}{6} \times \frac{3}{4} = ?$$

☐ $\frac{4}{5}$

☐ $\frac{3}{4}$

☐ $\frac{2}{3}$

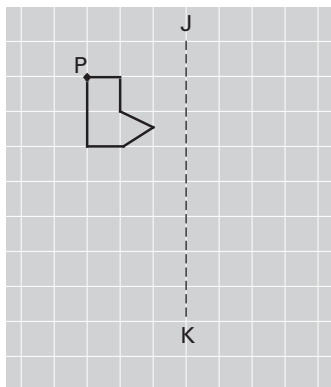
☒ $\frac{5}{8}$

SHADE ONE BOX



QUESTION 17

Ki Min drew this shape.

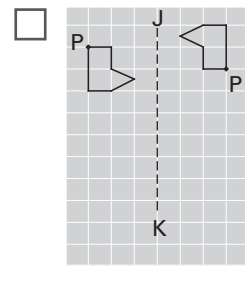
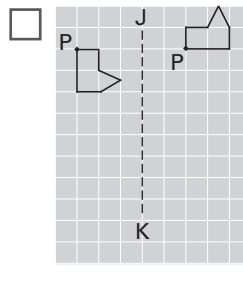
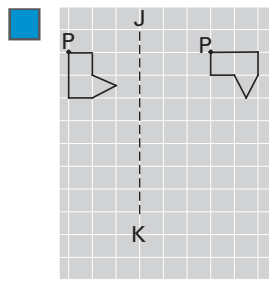
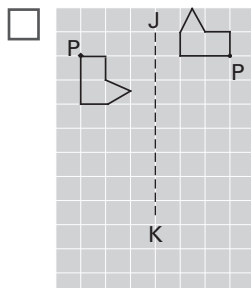


SHADE ONE BOX



He reflects it in the line JK and then rotates it 90° in an anticlockwise direction about point P.

What would it look like after it has been reflected and rotated?

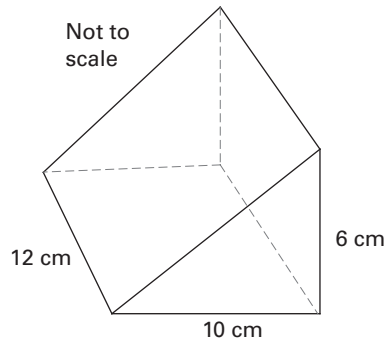


QUESTION 18

What is the volume of this solid?



WRITE YOUR OWN ANSWER



360 cm³

QUESTION 19

A number is multiplied by 7 and then 5 is added. The answer is 61.
What is the number?



WRITE YOUR OWN ANSWER

8

QUESTION 20

Mawson Antarctic Base – temperatures in June 2009

	Minimum temperature (°C)
Lowest temperature	-25.6
Highest temperature	-10.1



WRITE YOUR OWN ANSWER

What was the difference between the lowest and highest minimum temperature in June?

15.5 °C

QUESTION 21

Alexander created a table to show the favourite colour of students in Year 9.



WRITE YOUR OWN ANSWER

Favourite colour	Number of students
Red	12
Blue	29
Purple	51
Green	?
Pink	28
Total	150

What percentage of Year 9 students like green?

20%

QUESTION 22

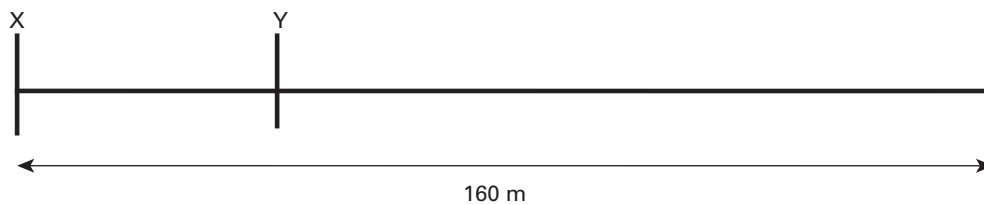
SHADE ONE BOX

Over a two-week period, Amber planted x trees in a bush regeneration area. In the same time period, Tyus planted 25 more trees than Amber. Together they planted a total of 116 trees. Which equation represents this information?

- ☐ $x - 25 = 116$
- ☐ $x + 25 = 116$
- ☒ $2x + 25 = 116$
- ☐ $2(x - 25) = 116$

QUESTION 23

SHADE ONE BOX



The distance from Y to Z is three times the distance from X to Y. The distance from X to Z is 160 m. What is the distance from X to Y?

- ☐ 24 m ☐ 30 m ☒ 40 m ☐ 45 m

QUESTION 24

SHADE ONE BOX

Kishor drove his car 280 km in 3.5 hours. What was his average speed per hour?

- ☒ 80 km/h ☐ 90 km/h ☐ 75 km/h ☐ 60 km/h

QUESTION 25

SHADE ONE BOX

This table shows the number of loaves of different types of bread sold in a bakery on one day.

Type of bread	White	Wholemeal	Multigrain	Sourdough	Raisin bread
Number of loaves	170	240	65	95	80

What is the ratio of wholemeal loaves to raisin bread loaves sold on this day?

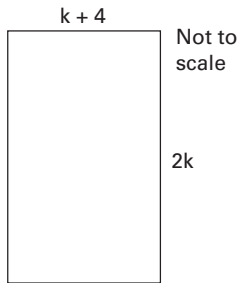
- ☒ 3:1
- ☐ 4:1
- ☐ 1:3
- ☐ 1:4

QUESTION 26

SHADE ONE BOX



Which of the following shows the correct expression for the perimeter of this rectangle?



☒ $6k + 8$

☐ $3k + 4$

☐ $2k^2 + 4$

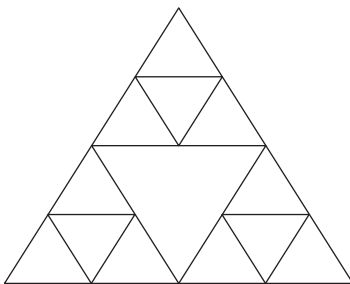
☐ $2k^2 + 8k$

QUESTION 27



WRITE YOUR OWN ANSWER

How many triangles are there in this diagram?



17 triangles

QUESTION 28



WRITE YOUR OWN ANSWER

A box contains 30 loaves of bread, each of the same weight.

The box of loaves weighs 6 kg.

Gemma adds 10 more of these loaves to the box.

The weight of the 40 loaves now in the box is 8 kg.

QUESTION 29

SHADE ONE BOX



The number of computers Sophie has sold each week for the last 14 weeks is shown in the stem-and-leaf plot below.

Stem	Leaf
6	0 1 4
7	2 2 5 9
8	1 3 3 3
9	7 8 8

Key

6|0 = 60 computers

What is the range of the data in this stem-and-leaf plot?

☐ 60

☐ 83

☒ 38

☐ 26

QUESTION 30**WRITE YOUR OWN ANSWER**

Write 120 as a product of its prime factors.

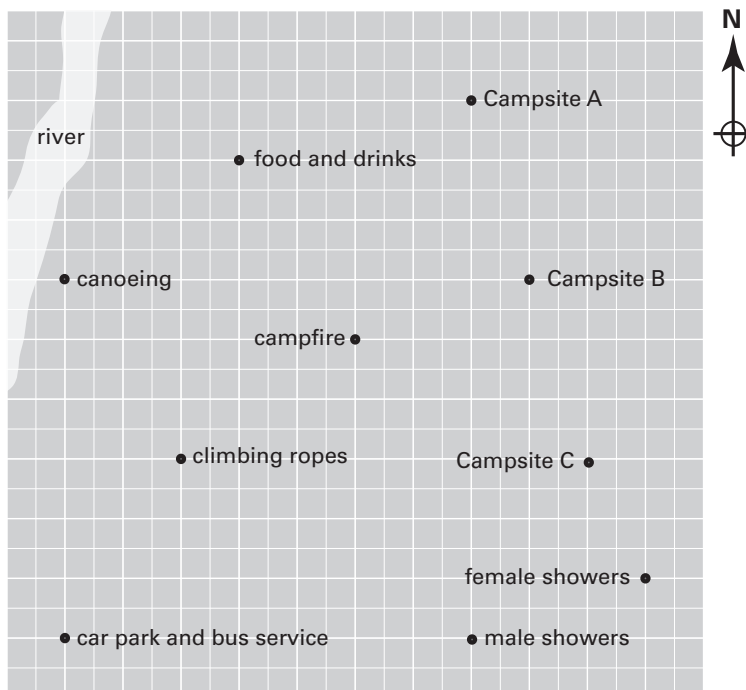
$$5 \times 3 \times 2^3$$

QUESTION 31**SHADE ONE BOX**

One Australian dollar buys 0.6 Euros. How many Australian dollars would be equivalent to 90 Euros, using this exchange rate?

☐ \$175☒ \$150☐ \$54☐ \$60**QUESTION 32****WRITE YOUR OWN ANSWER**

This is a map of a camping and recreation area.



If 1 unit is equivalent to 50 m, what is the shortest actual distance between the canoeing meeting point and campsite B?

 m