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0580/12

October/November 2017

1 hour

Additional Materials: Electronic calculator Geometrical instruments
Tracing paper (optional)

READ THESE INSTRUCTIONS FIRST

DO **NOT** WRITE IN ANY BARCODES.

For π , use either your calculator value or 3.142.

The total of the marks for this paper is 56.

This document consists of **10** printed pages and **2** blank pages.

- 1 Write, in figures, fourteen thousand and twenty seven.

..... [1]

- 2 One day, at noon, in Maseru, the temperature was 17°C .
At midnight the temperature was 20°C lower.

Work out the temperature at midnight.

..... $^{\circ}\text{C}$ [1]

- 3 Write down the value of 12^0 .

..... [1]

- 4 Write 5.17×10^{-3} as an ordinary number.

..... [1]

- 5 Write the following in order of size, starting with the smallest.

$$\frac{31}{50} \quad 64\% \quad \frac{5}{8} \quad 0.63$$

..... $<$ $<$ $<$ [2]
smallest

- 6 A taxi journey costs \$4.50, plus 80 cents for each kilometre travelled.
Julianna travels 7 km.

Work out the cost of her journey.

\$ [2]

- 7 Work out.

$$\frac{6.32 + 2.06}{4.15 - 0.12}$$

Give your answer correct to 1 decimal place.

..... [2]

- 8 (a) 1 and 12 are factors of 12.

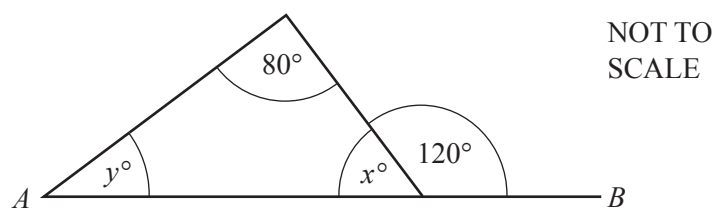
Write down all the other factors of 12.

..... [1]

- (b) Write down the multiples of 9 between 20 and 40.

..... [1]

9



In the diagram, AB is a straight line.

Find the value of x and the value of y .

$x =$

$y =$ [2]

- 10 Write 55 g as a percentage of 2.2 kg.

..... % [2]

- 11** The area of a triangle is 528 cm^2 .
The length of its base is 33 cm.

Calculate the perpendicular height of the triangle.

..... cm [2]

- 12 (a)** As the temperature increases, the number of ice creams sold increases.
What type of correlation is this?

..... [1]

- (b)** Write down the type of correlation there is between the height of an adult and the amount of money they earn.

..... [1]

- 13** Bastian has a bag containing four types of sweet.
He takes a sweet from the bag at random.

Sweet	Mint	Fruit	Toffee	Chocolate
Probability	0.15	0.3		0.2

Complete the table.

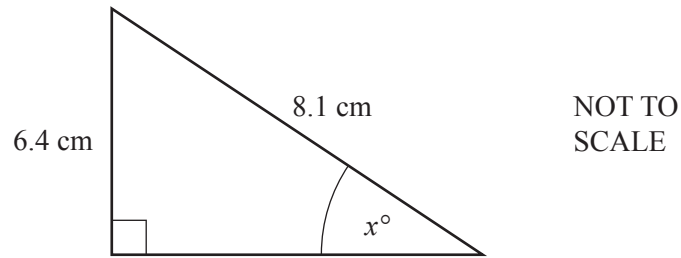
[2]

- 14** The length, l metres, of a ship is 362 m, correct to the nearest metre.

Complete the statement about the value of l .

..... $\leq l <$ [2]

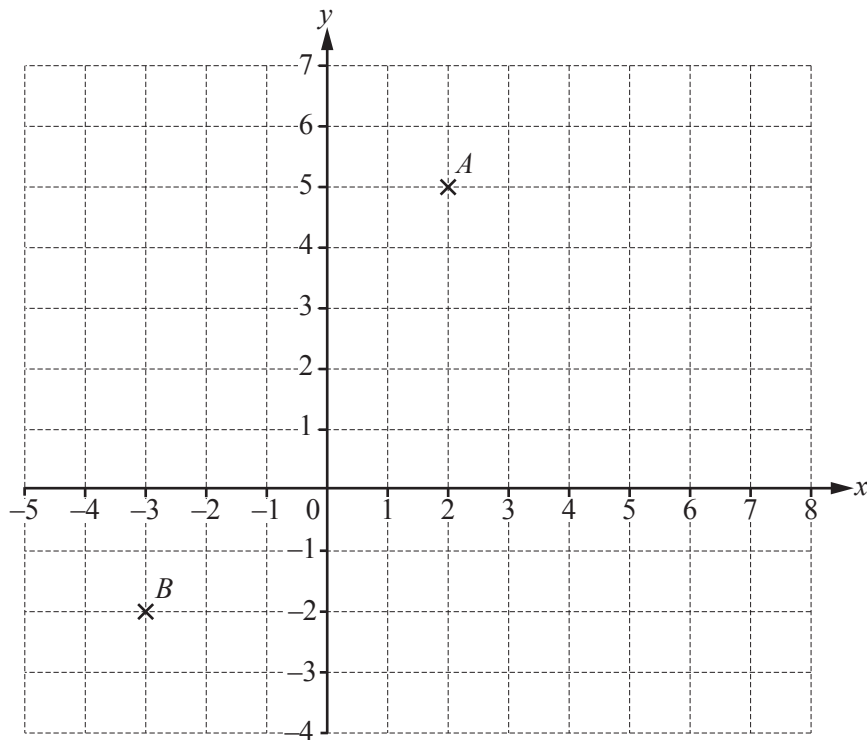
15



Calculate the value of x .

$x = \dots\dots\dots$ [2]

16



(a) Write down the co-ordinates of point A .

(..... ,) [1]

(b) Plot point C at $(7, -2)$.

[1]

(c) Write down the mathematical name of the triangle formed by joining the points A , B and C .

..... [1]

17 AB is a straight line.



(a) Measure the length of AB .

..... cm [1]

(b) Mark the midpoint of AB .

[1]

(c) Draw a line perpendicular to AB .

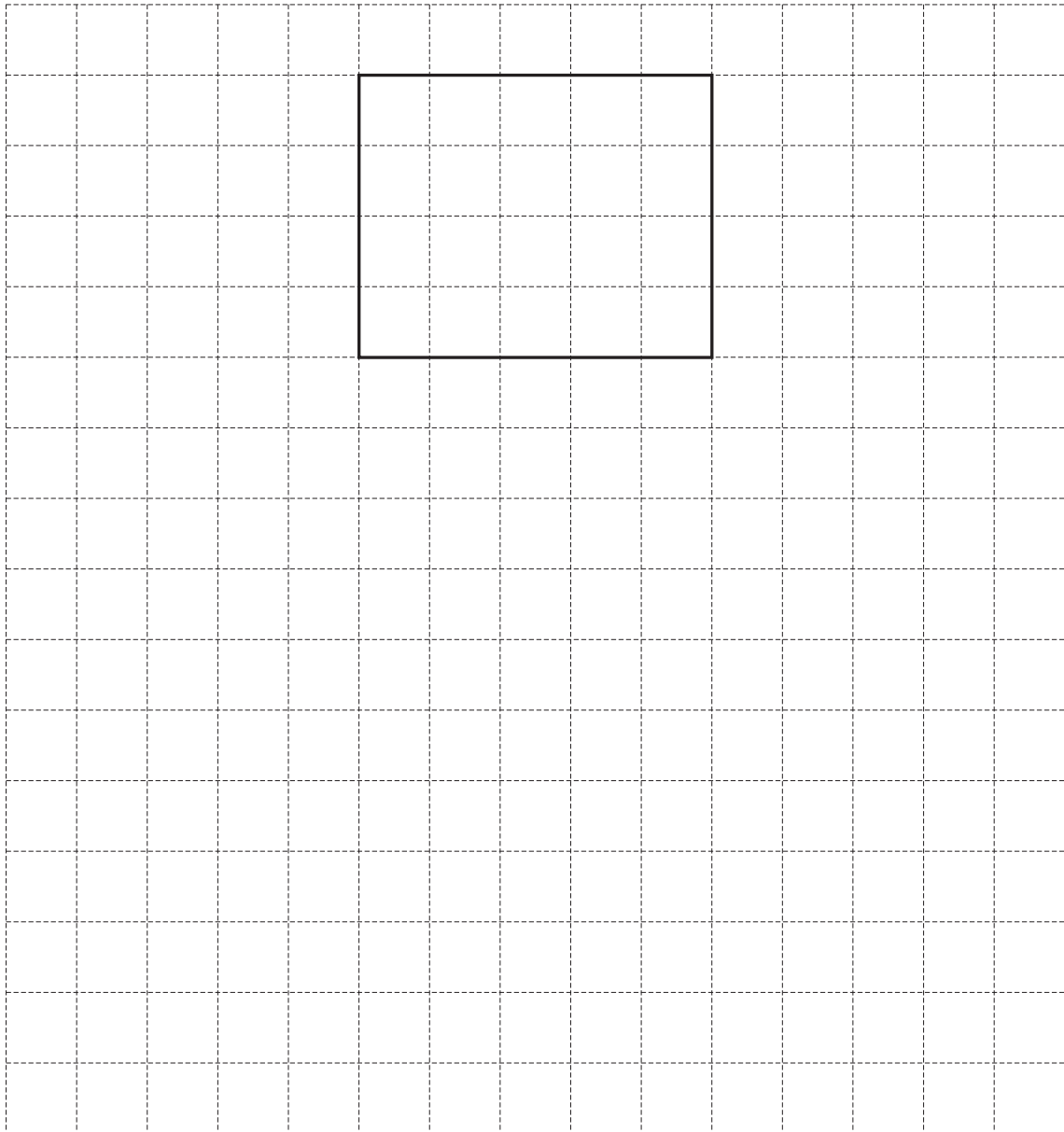
[1]

18 Find the size of the interior angle of a regular hexagon.

..... [3]

- 19 A cuboid measures 5 cm by 4 cm by 3 cm.

On the 1 cm^2 grid, draw an accurate net of this cuboid.
One face has been drawn for you.



[3]

- 20 (a) Write $\frac{11}{3}$ as a mixed number.

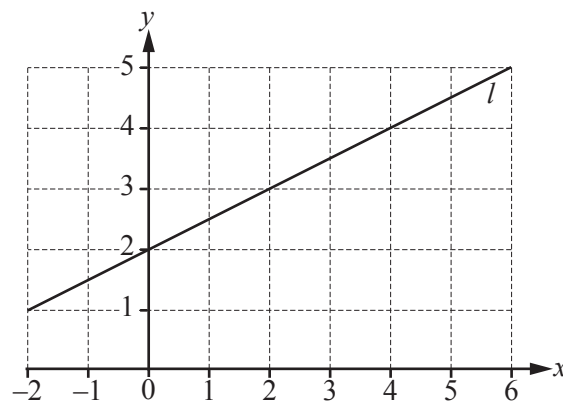
..... [1]

- (b) **Without using a calculator**, work out $\frac{1}{4} + \frac{5}{12}$.

Show all the steps of your working and give your answer as a fraction in its lowest terms.

..... [2]

21



Find the equation of the line l in the form $y = mx + c$.

$y =$ [3]

- 22 (a)** These are the first four terms of a sequence.

8 15 22 29

- (i)** Write down the next term.

..... [1]

- (ii)** Write down the rule for continuing the sequence.

..... [1]

- (b)** These are the first four terms of a different sequence.

2 6 10 14

Find an expression for the n th term of this sequence.

..... [2]

- 23** Solve the equations.

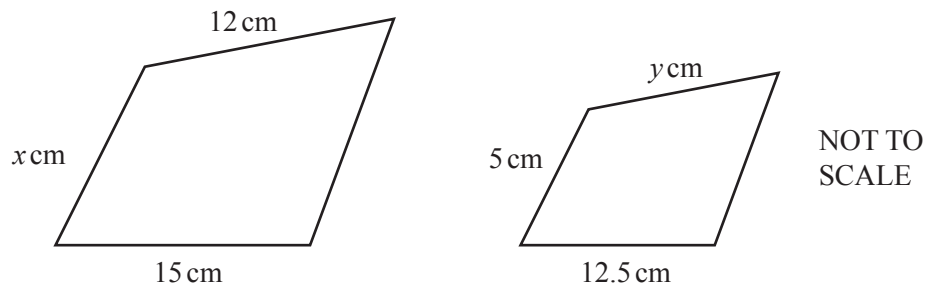
(a) $7 - 3n = 11n + 2$

$n =$ [2]

(b) $\frac{p-3}{5} = 3$

$p =$ [2]

24



The two shapes are mathematically similar.

Find the value of

(a) x ,

$x = \dots\dots\dots$ [2]

(b) y .

$y = \dots\dots\dots$ [2]

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