Cambridge IGCSE

Cambridge International Examinations
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

MATHEMATICS **0580/12**

Paper 1 (Core) **October/November 2017**

1 hour

Candidates answer on the Question Paper.

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

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.
If working is needed for any question it must be shown below that question.
Electronic calculators should be used.
If the degree of accuracy is not specified in the question, and if the answer is not exact, give the answer to three significant figures. Give answers in degrees to one decimal place.
For π, use either your calculator value or 3.142.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.
The total of the marks for this paper is 56.

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

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

View solution

..... [1]

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

View solution

Work out the temperature at midnight.

..... °C [1]

3 Write down the value of 12^0.

View solution

..... [1]

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

View solution

..... [1]

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

View solution

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

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

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

View solution

Work out the cost of her journey.

\$ ..... [2]

7 Work out.

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

View solution

Give your answer correct to 1 decimal place.

..... [2]

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

View solution

Write down all the other factors of 12.

..... [1]

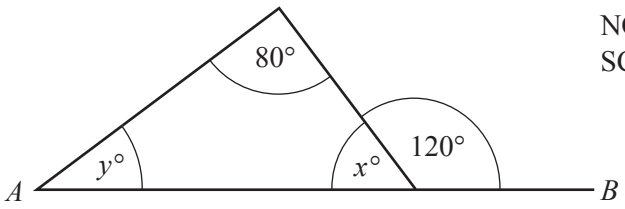
(b) Write down the multiples of 9 between 20 and 40.

View solution

..... [1]

9

View solution



NOT TO SCALE

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.

View solution

.....% [2]

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

View solution

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?

View solution

..... [1]

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

View solution

..... [1]

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

View solution

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.

View solution

Complete the statement about the value of l.

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

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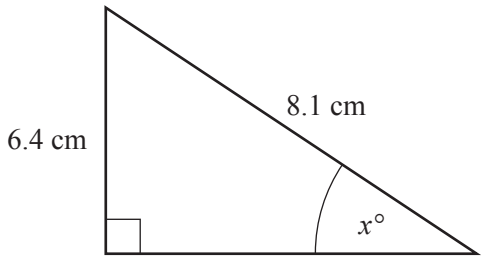
15

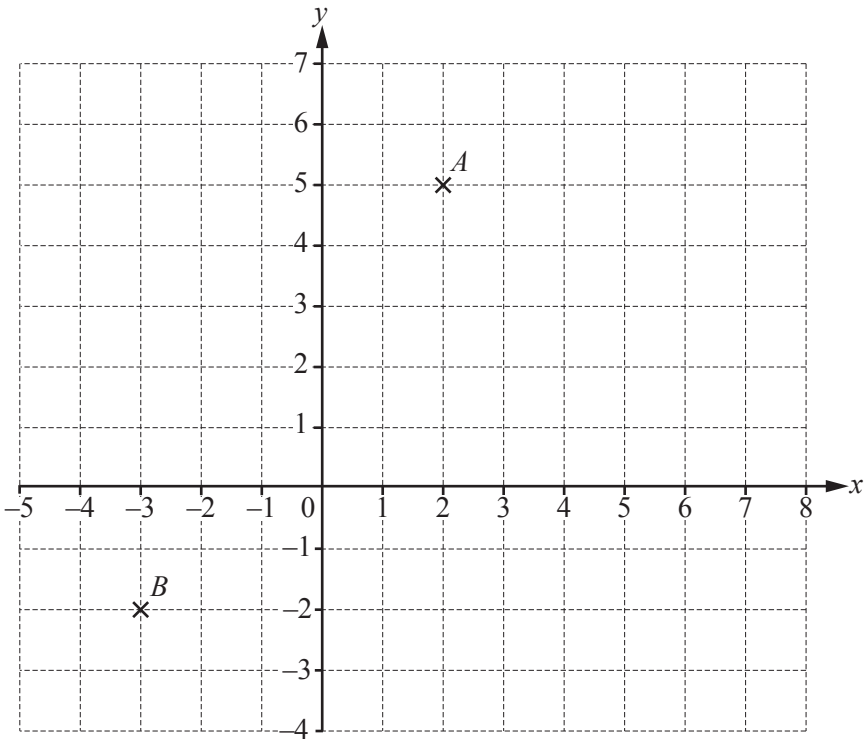


NOT TO SCALE

Calculate the value of x.

$x =$ ..... [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.

View solution

..... cm [1]

(b) Mark the midpoint of AB. [1]

View solution

(c) Draw a line perpendicular to AB. [1]

View solution

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

View solution

..... [3]

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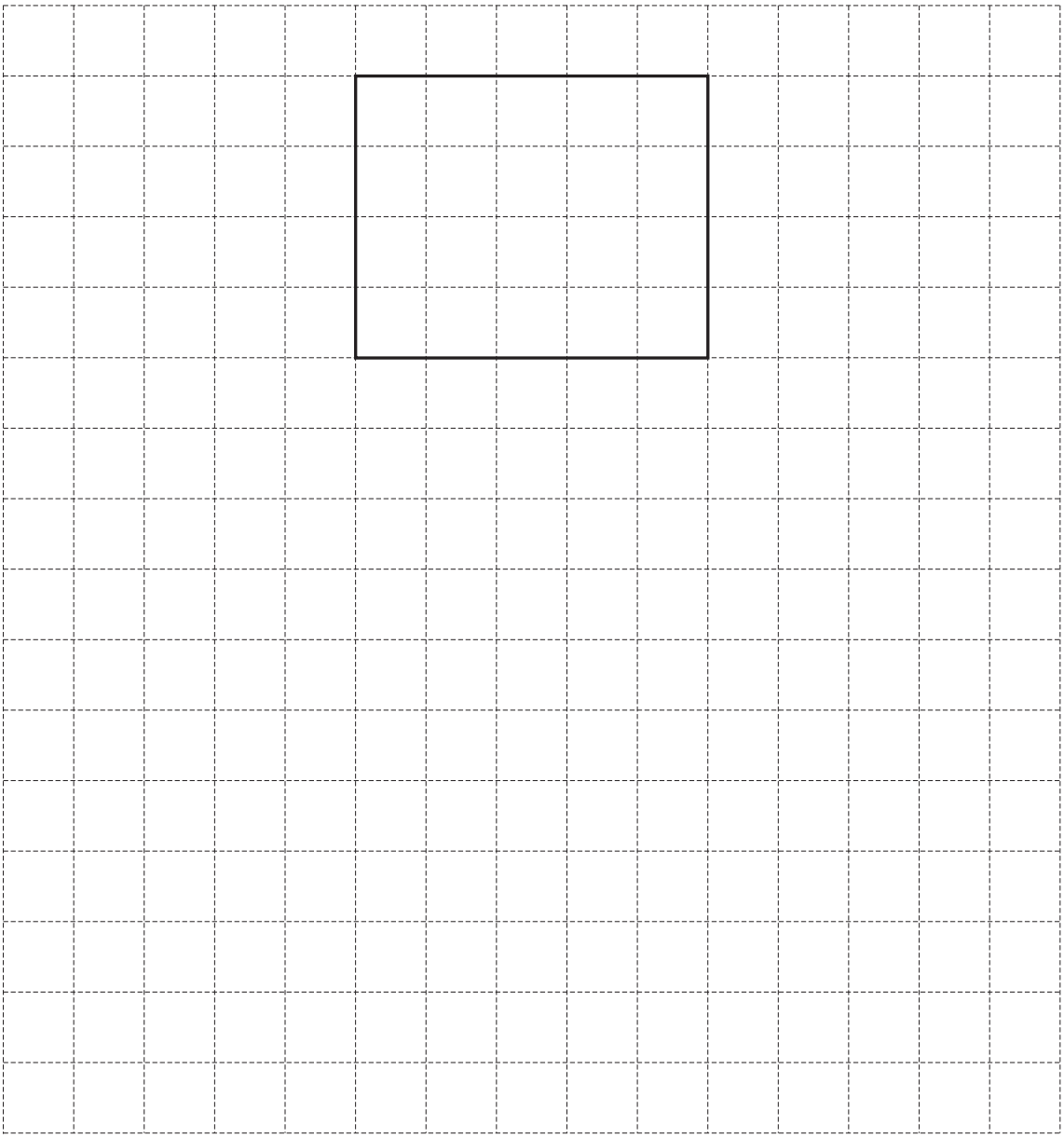
19 A cuboid measures 5 cm by 4 cm by 3 cm.

View solution

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.

View solution

..... [1]

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

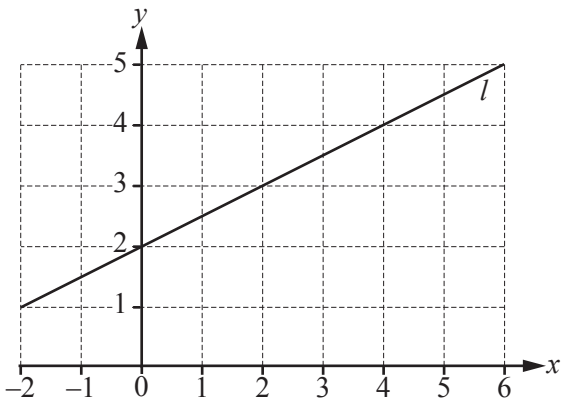
Show all the steps of your working and give your answer as a fraction in its lowest terms.

View solution

..... [2]

21

View solution



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.

View solution

8 15 22 29

(i) Write down the next term.

..... [1]

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

View solution

..... [1]

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

View solution

2 6 10 14

Find an expression for the nth term of this sequence.

..... [2]

23 Solve the equations.

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

View solution

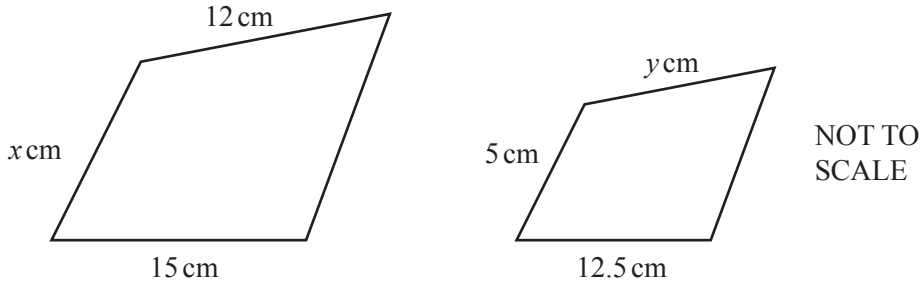
$n =$ ..... [2]

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

View solution

$p =$ ..... [2]

24



The two shapes are mathematically similar.

Find the value of

(a) x,

View solution

$x =$ ..... [2]

(b) y.

View solution

$y =$ ..... [2]

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