Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

MATHEMATICS **0580/12**

Paper 1 (Core) **October/November 2020**

1 hour

You must answer on the question paper.

You will need: Geometrical instruments

INSTRUCTIONS

- Answer **all** questions.
- Use a black or dark blue pen. You may use an HB pencil for any diagrams or graphs.
- Write your name, centre number and candidate number in the boxes at the top of the page.
- Write your answer to each question in the space provided.
- Do **not** use an erasable pen or correction fluid.
- Do **not** write on any bar codes.
- You should use a calculator where appropriate.
- You may use tracing paper.
- You must show all necessary working clearly.
- Give non-exact numerical answers correct to 3 significant figures, or 1 decimal place for angles in degrees, unless a different level of accuracy is specified in the question.
- For π, use either your calculator value or 3.142.

INFORMATION

- The total mark for this paper is 56.
- The number of marks for each question or part question is shown in brackets [ ].

1 Write two hundred thousand and seventeen in figures.

View solution

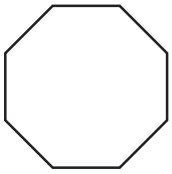
..... [1]

2 Write 867 correct to the nearest ten.

View solution

..... [1]

3



View solution

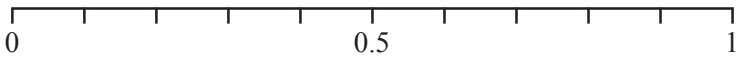
Write down the order of rotational symmetry of this regular octagon.

..... [1]

4 A bag contains 20 balls.
5 of these balls are red.
A ball is picked at random from the bag.

View solution

On the probability scale, draw an arrow (↓) to show the probability that this ball is red.



[1]

5 Work out the number of hours in 3 days.

View solution

..... hours [1]

6 Write these in order of size, starting with the smallest.

View solution

$\frac{11}{27}$ 41% 0.4 $\frac{16}{39}$

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

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7 Solve the equation.

$$6 - 2x = 3x$$

View solution

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

8 Work out the difference in temperature between $-6\,°C$ and $5\,°C$.

View solution

..... °C [1]

9 $A = \frac{1}{4}bc^2$

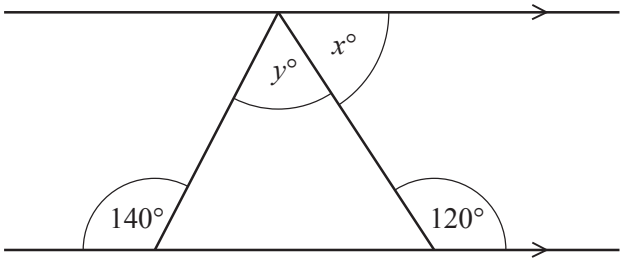
View solution

Calculate the value of A when $b = 3$ and $c = 6$.

..... [2]

10

View solution



NOT TO SCALE

The diagram shows a triangle drawn between a pair of parallel lines.

Find the value of x and the value of y.

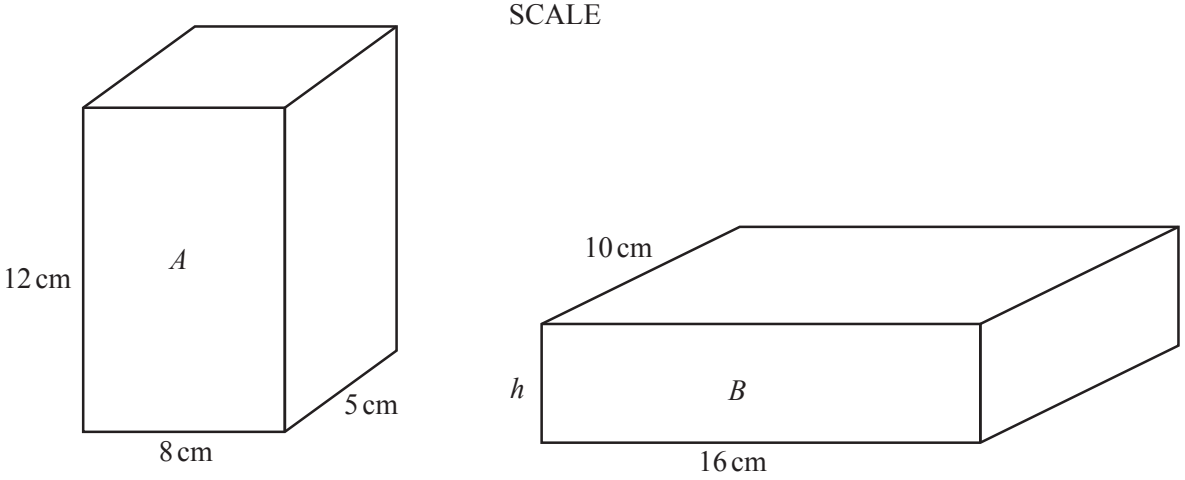
$x =$ .....

$y =$ ..... [3]

11

NOT TO SCALE

View solution



The diagram shows cuboid A and cuboid B.
Cuboid A has the same volume as cuboid B.

Calculate the height, h, of cuboid B.

$h =$ ..... cm [3]

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12 Fernando records the favourite sport of each of 20 people.

football	cricket	rugby	cricket	rugby	rugby	football	football	rugby	football
cricket	rugby	tennis	football	tennis	football	rugby	cricket	football	cricket

View solution

(a) Complete the frequency table to show this information.
You may use the tally column to help you.

Favourite sport	Tally	Frequency
Cricket		
Football		
Rugby		
Tennis		

[2]

View solution

(b) Fernando wants to draw a pie chart to show this information.

Work out the sector angle for football.

..... [2]

13 Increase 42 by 16%.

View solution

..... [2]

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14 These are the first four terms of a sequence.

17 10 3 −4

(a) (i) Find the next term.

View solution

..... [1]

(ii) Write down the term to term rule for continuing this sequence.

View solution

..... [1]

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

View solution

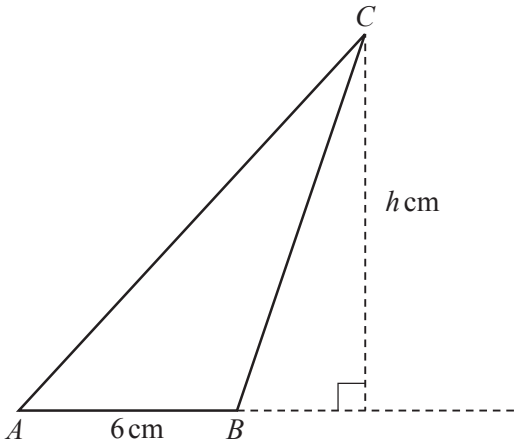
−2 2 6 10

Find an expression for the nth term.

..... [2]

15

View solution



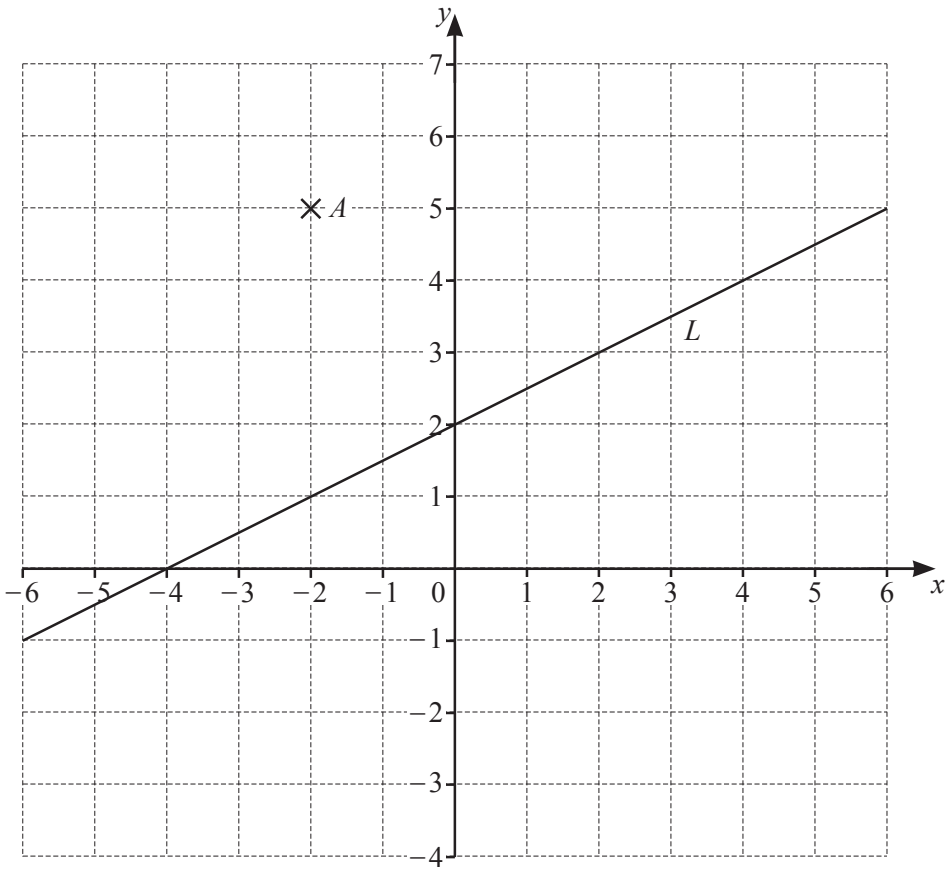
NOT TO SCALE

The area of triangle ABC is $27\,\text{cm}^2$ and $AB = 6\,\text{cm}$.

Calculate the value of h.

$h =$ ..... [2]

16 (a)



(i) Write down the coordinates of point A.

(..... , ...) [1]

(ii) On the grid, plot the point $(2, -3)$. [1]

(iii) The line L is shown on the grid.

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

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

(b) Write down the equation of the line parallel to $y = 5x + 6$ that passes through $(0, -7)$.

$y =$ ..... [1]

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17 **Without using a calculator**, work out $\frac{5}{6} \div 1\frac{1}{3}$.
You must show all your working and give your answer as a fraction in its simplest form.

View solution

..... [3]

18 **(a)** The length, l cm, of a pencil is 18 cm, correct to the nearest centimetre.

View solution

Complete the statement about the value of l.

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

(b) **(i)** Write 9.314×10^5 as an ordinary number.

View solution

..... [1]

(ii) Calculate $(4.1 \times 10^{-3}) \times (8.9 \times 10^7)$.
Give your answer in standard form.

View solution

..... [2]

(c) Calculate $\sqrt{(8 + 4 \times 75^{0.6})}$.

View solution

..... [1]

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19 The length of one side of a rectangle is 12 cm.
The length of the diagonal of the rectangle is 13 cm.

View solution

Calculate the area of the rectangle.

..... cm^2 [3]

20 Alex and Chris share sweets in the ratio Alex : Chris = 7 : 3.
Alex receives 20 more sweets than Chris.

View solution

Work out the number of sweets Chris receives.

..... [2]

21 Write 825 as the product of its prime factors.

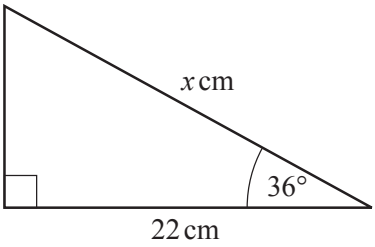
View solution

..... [2]

22

View solution

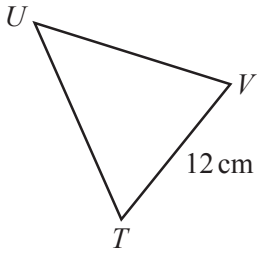
NOT TO SCALE

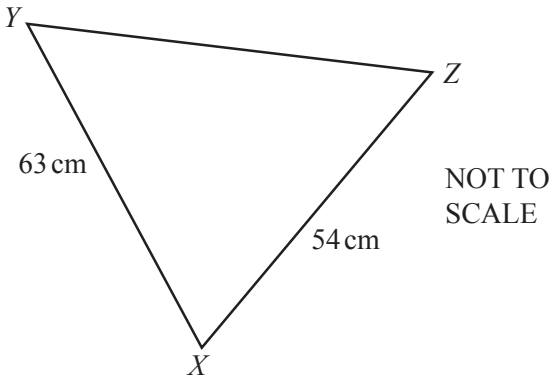


Show that the value of x is 27.2, correct to 3 significant figures.

[3]

23





NOT TO SCALE

View solution

The diagram shows two similar triangles *TUV* and *XYZ*.

Calculate *UT*.

UT = ... cm [2]

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