Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER			

MATHEMATICS **0580/13**

Paper 1 (Core) **May/June 2024**

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 [ ].

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1 Write the number two million two thousand and two in figures.

View solution

..... [1]

2 Put one pair of brackets into this calculation to make it correct.

View solution

$$5 + 4 \times 3 + 9 = 53$$

[1]

3 Simplify.

View solution

$$7x - 8y - x - y$$

..... [2]

4 **(a)** Write 164 703 correct to the nearest thousand.

View solution

..... [1]

(b) Write 16.983 correct to 1 decimal place.

View solution

..... [1]

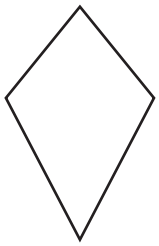
(c) Write 0.037 665 correct to 2 significant figures.

View solution

..... [1]

5 **(a)**

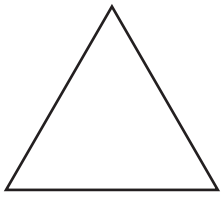
View solution



On the diagram, draw any lines of symmetry. [1]

(b)

View solution



Write down the order of rotational symmetry of this shape.

..... [1]

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6 Write these numbers in order, starting with the smallest.

View solution

$0.45 \qquad 42\% \qquad \frac{4}{11} \qquad \frac{2}{5}$

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

7 The base of a cuboid measures 10 cm by 7 cm.
The volume of the cuboid is 280 cm^3.

View solution

Calculate the height of the cuboid.

..... cm [2]

8 In a city, the probability that it will rain today is 0.15 .

View solution

Find the probability that it will not rain today in this city.

..... [1]

9 One day the temperature in Tokyo is −5 °C and the temperature in Manila is 18 °C.

(a) Work out the difference between these two temperatures.

View solution

..... °C [1]

(b) The temperature in Tokyo rises by 4 °C.

View solution

Find the new temperature in Tokyo.

..... °C [1]

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

View solution

3 10 17 24

(i) Write down the next term.

..... [1]

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

View solution

..... [1]

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

View solution

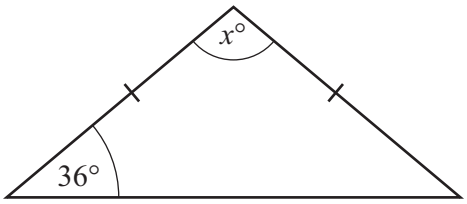
16 14 11 7

Write down the next two terms of this sequence.

..... , ... [2]

11

View solution



NOT TO SCALE

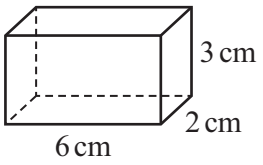
The diagram shows an isosceles triangle.

Find the value of x.

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

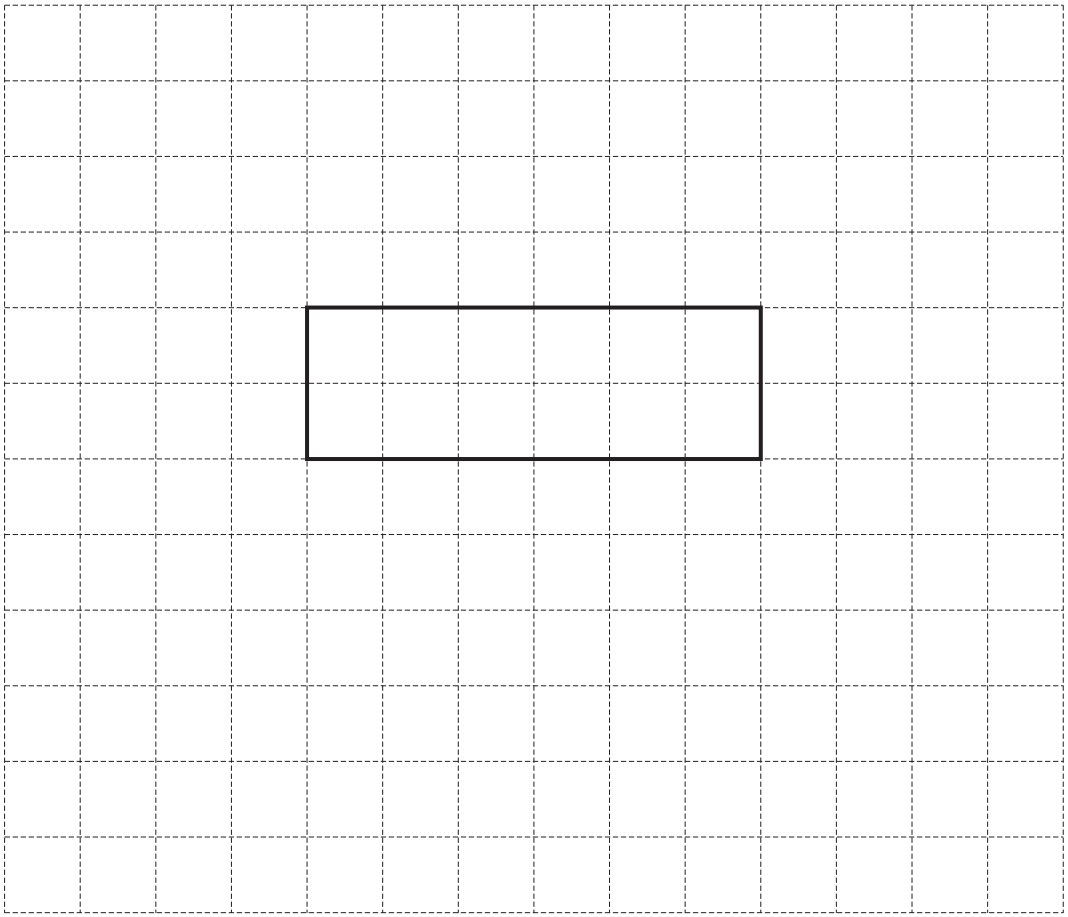
View solution

12 The diagram shows a cuboid.



NOT TO SCALE

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



[3]

13 Factorise completely.

$$4x^2y - 5xy^2$$

View solution

..... [2]

14 The scale of a map is $1 : 40\,000$.
On the map the distance between two villages is 37 cm.

Calculate the actual distance between the two villages.
Give your answer in kilometres.

View solution

..... km [2]

15 **Without using a calculator**, work out $\frac{3}{7} - \frac{1}{14}$.

You must show all your working and give your answer as a fraction in its simplest form.

View solution

..... [2]

16 The price of a game increases from \$48 to \$56.40 .

Calculate the percentage increase in the price.

View solution

.....% [2]

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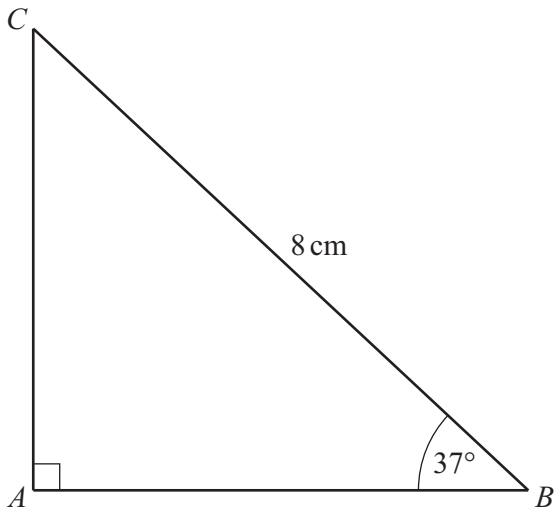
17

View solution



NOT TO SCALE

The diagram shows a right-angled triangle.

Calculate AB.

$AB =$ ..... cm [2]

18 The length, s metres, of a ship is 83 m, correct to the nearest metre.

View solution

Complete this statement about the value of s.

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

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19 Solve the simultaneous equations.

$$5t - 2w = 19$$
$$3t + 2w = 5$$

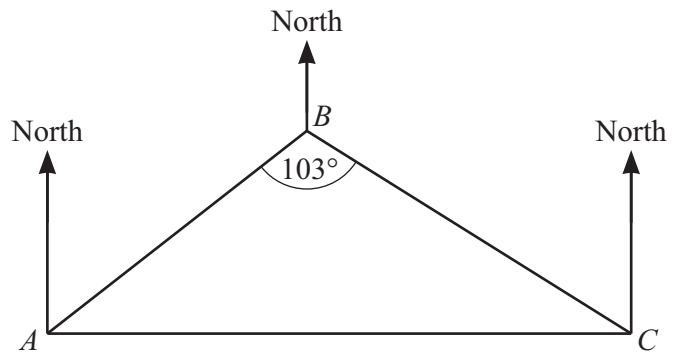
View solution

$t =$ .....

$w =$ ..... [2]

20 The diagram shows the positions of three towns A, B and C.

View solution



NOT TO SCALE

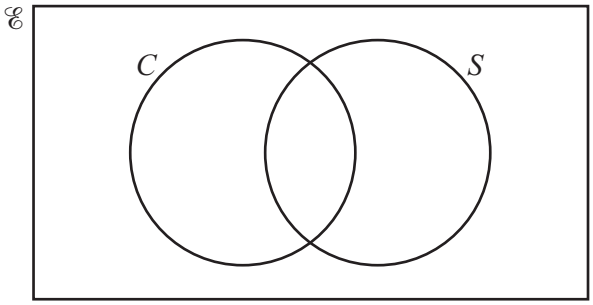
Angle $ABC = 103°$.
The bearing of town B from town A is 048°.
Town C is due east of town A.

Find the bearing of town C from town B.

..... [4]

21 **(a)** $\mathscr{E} = \{1, 4, 5, 8, 9, 12, 16, 64\}$
$C = \{\text{cube numbers}\}$
$S = \{\text{square numbers}\}$

View solution



(i) Complete the Venn diagram. [2]

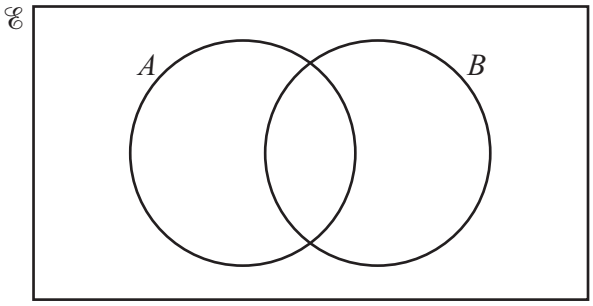
(ii) Find $\text{n}(C \cup S)$.

View solution

..... [1]

(b)

View solution



On this Venn diagram, shade the region $A \cap B$. [1]

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22 **(a)** Write these numbers in standard form.

View solution

(i) 0.007

..... [1]

(ii) 700 000 000

View solution

..... [1]

(b) Calculate $\dfrac{3200 \times 5.4 \times 10^{-3}}{4.8 \times 10^{-4}}$.

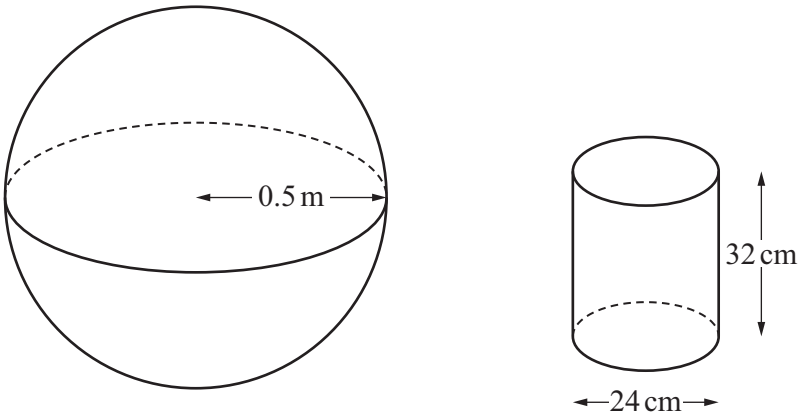
View solution

Give your answer in standard form.

..... [2]

23

View solution



The diagram shows a spherical tank with radius 0.5 m and a cylindrical jug with diameter 24 cm and height 32 cm.
The tank is full of water.

Calculate how many times the jug can be completely filled with water from the tank.
[The volume, V, of a sphere with radius r is $\frac{4}{3}\pi r^3$.]

..... [5]

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