Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME									
CENTRE NUMBER						CANDIDATE NUMBER				

7511408507

MATHEMATICS **0580/12**

Paper 1 (Core) **May/June 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 [ ].

This document has **12** pages. Blank pages are indicated.

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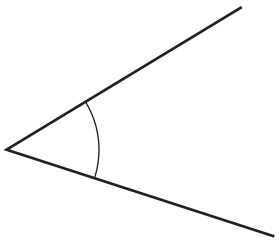
1 **(a)** Write in figures the number fifty-three thousand and thirty-five.

..... [1]

(b) Write 8379 correct to the nearest hundred.

..... [1]

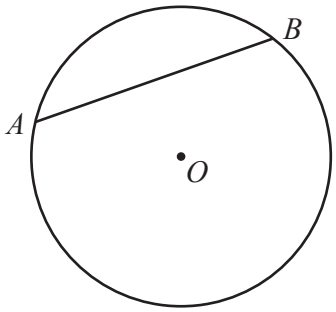
2 **(a)**



Write down the mathematical name for this type of angle.

..... [1]

(b)



NOT TO SCALE

A and B lie on a circle, centre O.

(i) Write down the mathematical name for line AB.

..... [1]

(ii) $OA = 8\,\text{cm}$

Write down the length of the diameter of this circle.

..... cm [1]

3 Write down the reciprocal of 10.

..... [1]

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4 **(a)** Find the value of $\sqrt{196}$.

..... [1]

(b) Calculate 15^3.

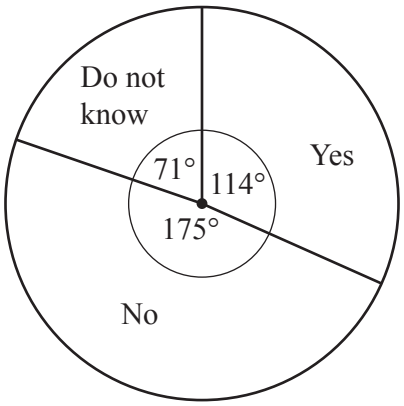
..... [1]

5 Put one pair of brackets in each statement to make it correct.

(a) 16 ÷ 8 + 4 × 2 = 1 [1]

(b) 16 ÷ 8 + 4 × 2 = 12 [1]

6 The 840 students in a school are asked if they want a change of school uniform.
The results are shown in the pie chart.



Show that the number of students who said Yes is 266.

[1]

7 Change 5.3 kilometres into metres.

..... m [1]

8 The scale drawing shows the positions of town *A* and town *B*.
The scale is 1 cm represents 12 kilometres.



Scale: 1 cm to 12 km

(a) Find the actual distance between town *A* and town *B*.

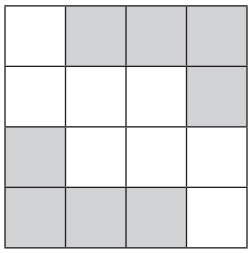
..... km [2]

(b) Town *C* is 72 km from town *A* and 96 km from town *B*.

On the scale drawing, construct the position of town *C*. [3]

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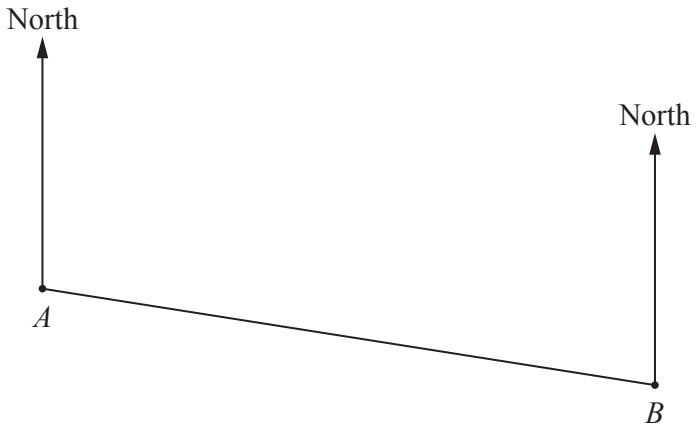
9



Write down the order of rotational symmetry of the diagram.

..... [1]

10



The bearing of B from A is 105°.

Find the bearing of A from B.

..... [2]

11 Write down

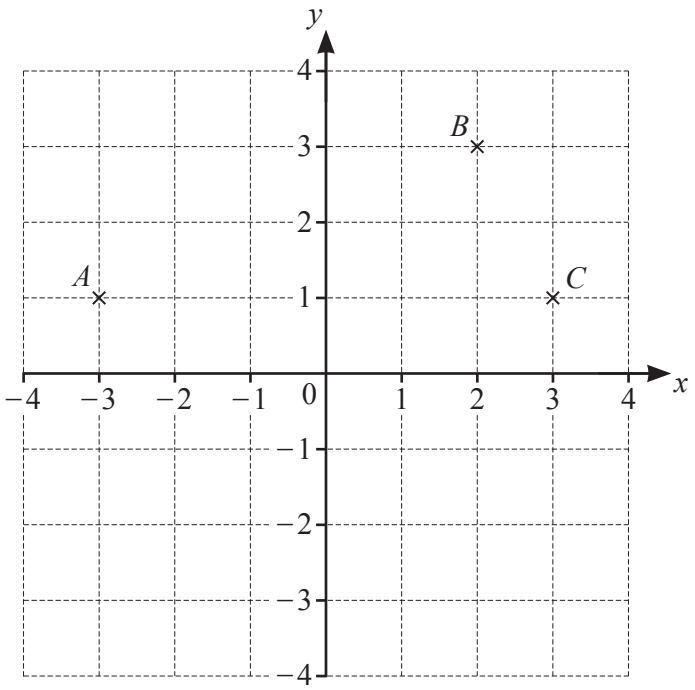
(a) a square number greater than 10,

..... [1]

(b) an irrational number.

..... [1]

12



Points A, B and C are shown on the grid.

(a) Write down the coordinates of point C.

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

(b) On the grid, plot point D so that $ABCD$ is a parallelogram. [1]

(c) On the grid, plot point E so that $\overrightarrow{EA} = \begin{pmatrix} -4 \\ 3 \end{pmatrix}$. [2]

13 The height, h metres, of a tower is 76.3 m, correct to 1 decimal place.

Complete this statement about the value of h.

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

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14 Rovers, United and City are football teams.

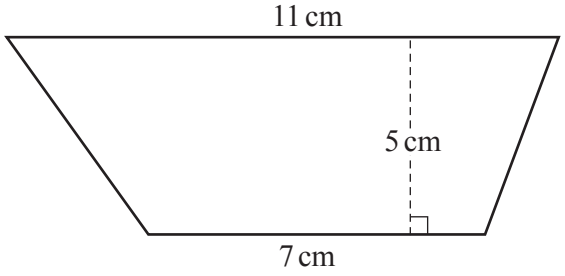
Rovers scored x goals.
United scored 8 goals more than Rovers.
City scored 3 goals less than twice the number of goals scored by Rovers.

The three teams scored a total of 117 goals.

Write down and solve an equation to find the value of x.

$x =$ ..... [4]

15

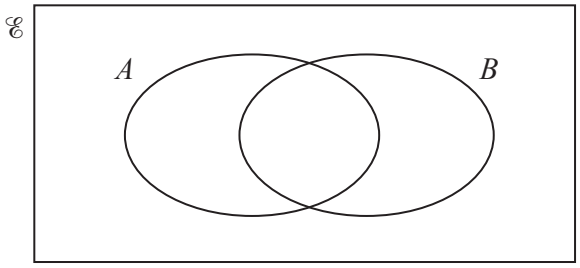


NOT TO SCALE

Calculate the area of the trapezium.

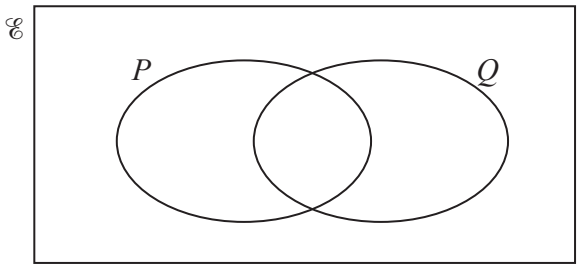
..... cm^2 [2]

16 (a)



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

(b) $\mathscr{E} = \{1, 2, 3, 4, 5, 6\}$
$P = \{x : x \text{ is an even number}\}$
$Q = \{x : x \text{ is a prime number}\}$



Complete the Venn diagram. [2]

17 Write 2^{-4} as a decimal.

..... [1]

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18 **Without using a calculator**, work out $1\frac{3}{4} - \frac{11}{12}$.
You must show all your working and give your answer as a fraction in its simplest form.

..... [3]

19 Roberto buys a toy for \$5.00 .
He then sells it for \$4.60 .

Calculate his percentage loss.

..... % [2]

20 Simplify $8t^8 \div 4t^4$.

..... [2]

21 **(a)** Write 45 000 in standard form.

..... [1]

(b) Write 2.06×10^{-2} as an ordinary number.

..... [1]

22 **(a)** Write down all the factors of 28.

..... [2]

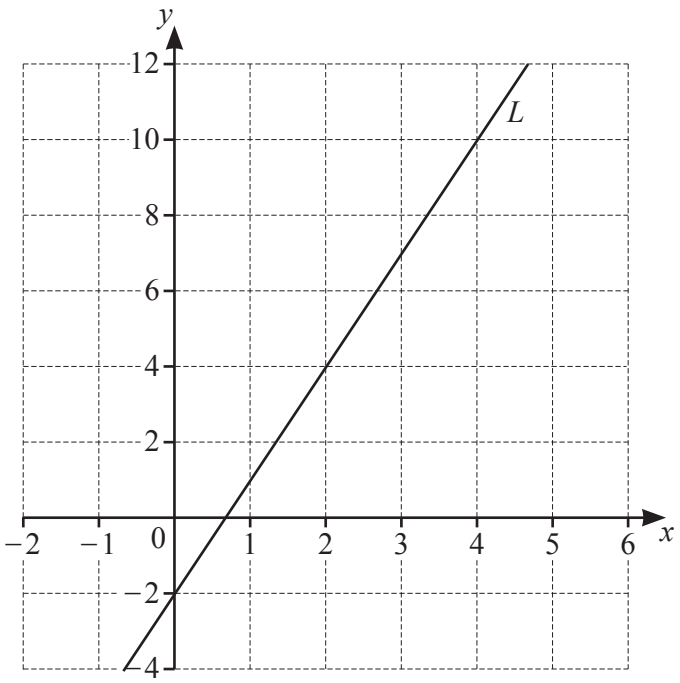
(b) Write 54 as a product of its prime factors.

..... [2]

(c) Find the lowest common multiple (LCM) of 48 and 60.

..... [2]

23



(a) Find the gradient of line L.

..... [2]

(b) Write down the equation of line L in the form $y = mx + c$.

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

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