



# Cambridge IGCSE™

CANDIDATE  
NAME

--

CENTRE  
NUMBER

--	--	--	--	--

CANDIDATE  
NUMBER

--	--	--	--



**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  $\pi$ , 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.

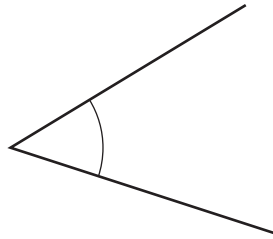
1 (a) Write in figures the number fifty-three thousand and thirty-five.

..... [1]

(b) Write 8379 correct to the nearest hundred.

..... [1]

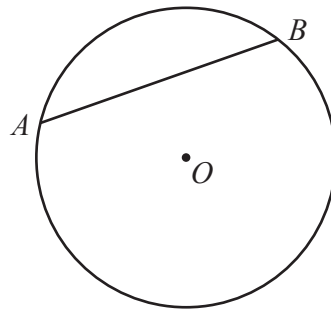
2 (a)



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)  $OA = 8$  cm

Write down the length of the diameter of this circle.

..... cm [1]

3 Write down the reciprocal of 10.

..... [1]

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

..... [1]

- (b) Calculate  $15^3$ .

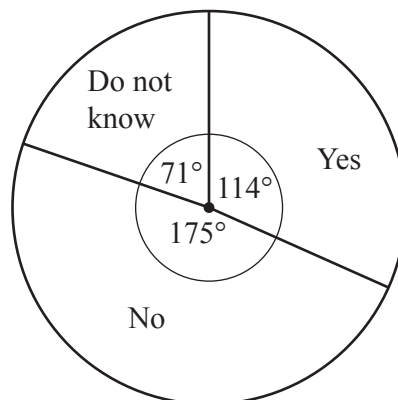
..... [1]

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

(a)  $16 \div 8 + 4 \times 2 = 1$  [1]

(b)  $16 \div 8 + 4 \times 2 = 12$  [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.



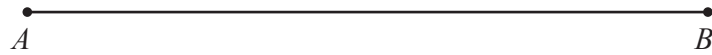
Show that the number of students who said Yes is 266.

[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

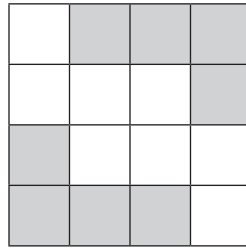
(a) Find the actual distance between town *A* and town *B*.

..... 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]

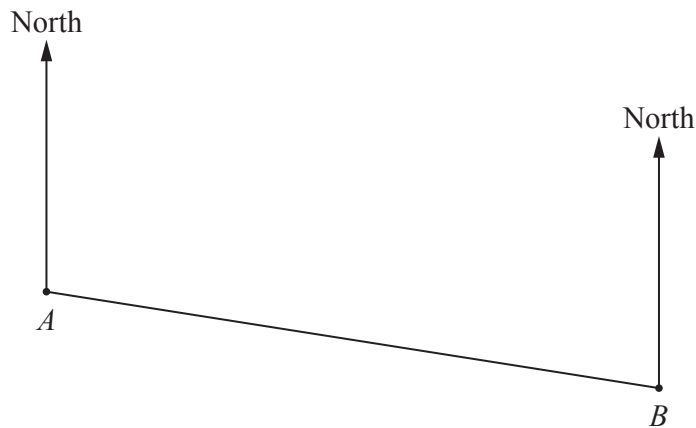
9



Write down the order of rotational symmetry of the diagram.

..... [1]

10



NOT TO SCALE

The bearing of  $B$  from  $A$  is  $105^\circ$ .

Find the bearing of  $A$  from  $B$ .

..... [2]

11 Write down

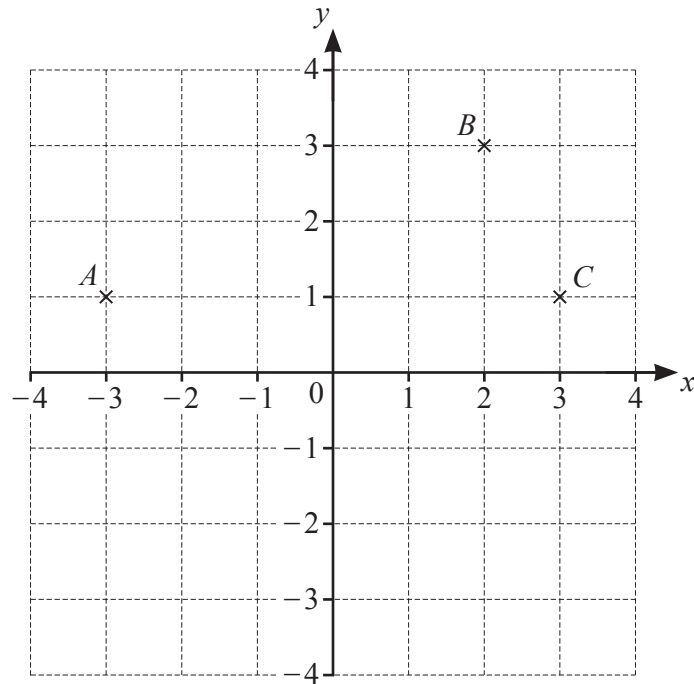
(a) a square number greater than 10,

..... [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  $\vec{EA} = \begin{pmatrix} -4 \\ 3 \end{pmatrix}$ . [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  $h$ .

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

14 Rovers, United and City are football teams.

Rovers scored  $x$  goals.

United scored 8 goals more than Rovers.

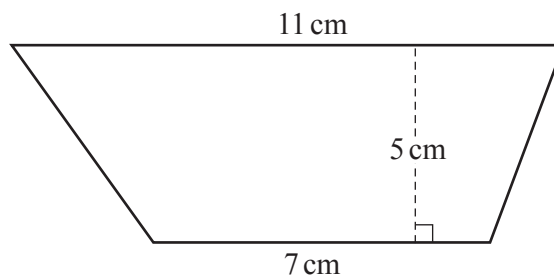
City scored 3 goals less than twice the number of goals scored by Rovers.

The three teams scored a total of 117 goals.

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

$x = \dots\dots\dots$  [4]

15

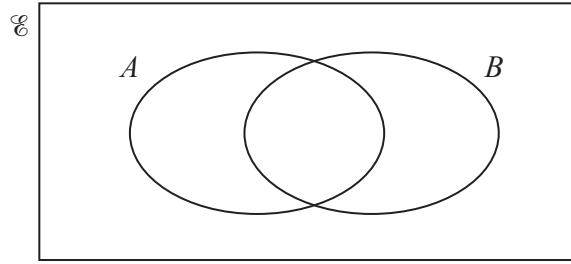


NOT TO  
SCALE

Calculate the area of the trapezium.

$\dots\dots\dots \text{cm}^2$  [2]

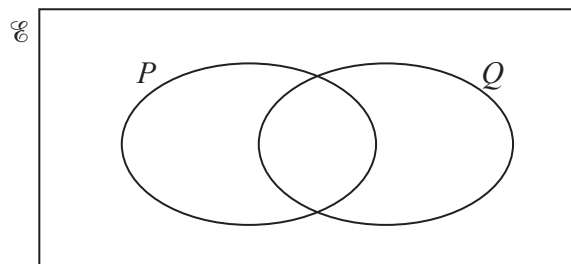
16 (a)



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

[1]

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



Complete the Venn diagram.

[2]

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

..... [1]



- 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  $2.06 \times 10^{-2}$  as an ordinary number.

..... [1]

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

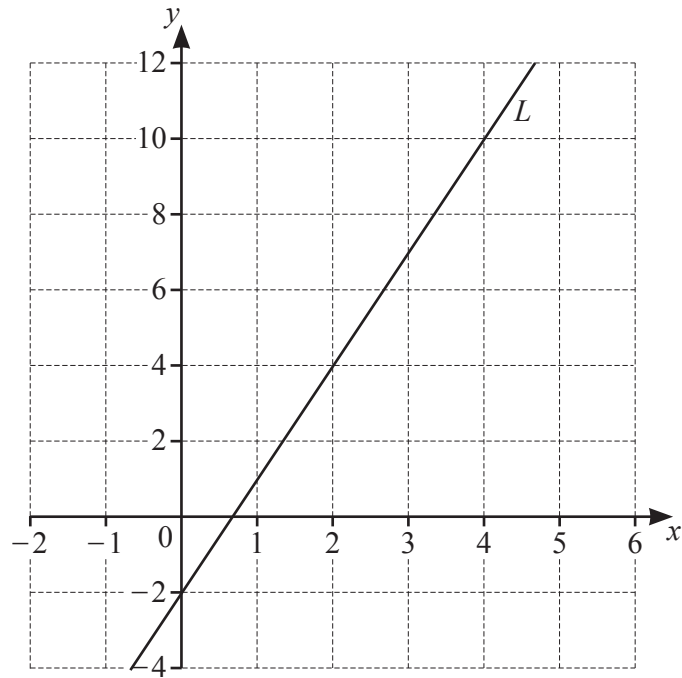
..... [2]

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

..... [2]

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

..... [2]



(a) Find the gradient of line  $L$ .

..... [2]

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

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

**BLANK PAGE**

---

Permission to reproduce items where third-party owned material protected by copyright is included has been sought and cleared where possible. Every reasonable effort has been made by the publisher (UCLES) to trace copyright holders, but if any items requiring clearance have unwittingly been included, the publisher will be pleased to make amends at the earliest possible opportunity.

To avoid the issue of disclosure of answer-related information to candidates, all copyright acknowledgements are reproduced online in the Cambridge Assessment International Education Copyright Acknowledgements Booklet. This is produced for each series of examinations and is freely available to download at [www.cambridgeinternational.org](http://www.cambridgeinternational.org) after the live examination series.

Cambridge Assessment International Education is part of the Cambridge Assessment Group. Cambridge Assessment is the brand name of the University of Cambridge Local Examinations Syndicate (UCLES), which itself is a department of the University of Cambridge.