



CANDIDATE  
NAME

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CENTRE  
NUMBER

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CANDIDATE  
NUMBER

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## 0580/12

May/June 2020

**1 hour**

You must answer on the question paper.

You will need: Geometrical instruments

- 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.

- 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.

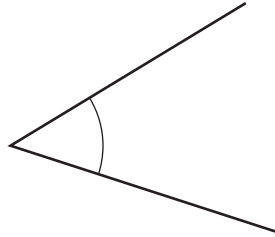
- 1 (a) Write in figures the number fifty-three thousand and thirty-five.

..... [1]

- (b) Write 8379 correct to the nearest hundred.

..... [1]

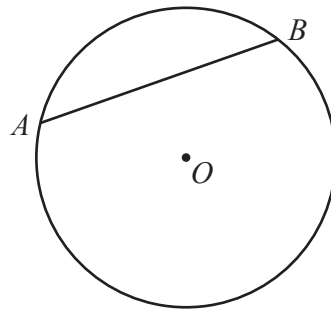
- 2 (a)



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)  $OA = 8\text{ cm}$

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  $15^3$ .

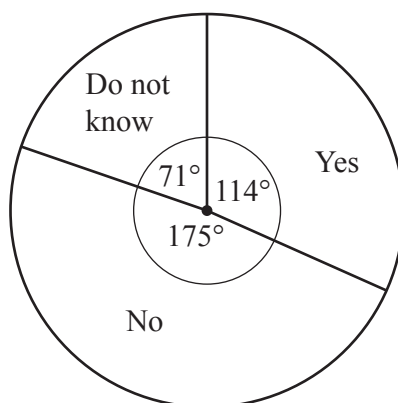
..... [1]

- 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.



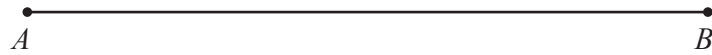
Show that the number of students who said Yes is 266.

[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]

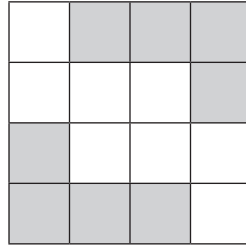
- (b) Town  $C$  is 72 km from town  $A$  and 96 km from town  $B$ .

On the scale drawing, construct the position of town  $C$ .

[3]

5

9



Write down the order of rotational symmetry of the diagram.

..... [1]

10

North



NOT TO  
SCALE

North



A

B

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

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

..... [2]

11 Write down

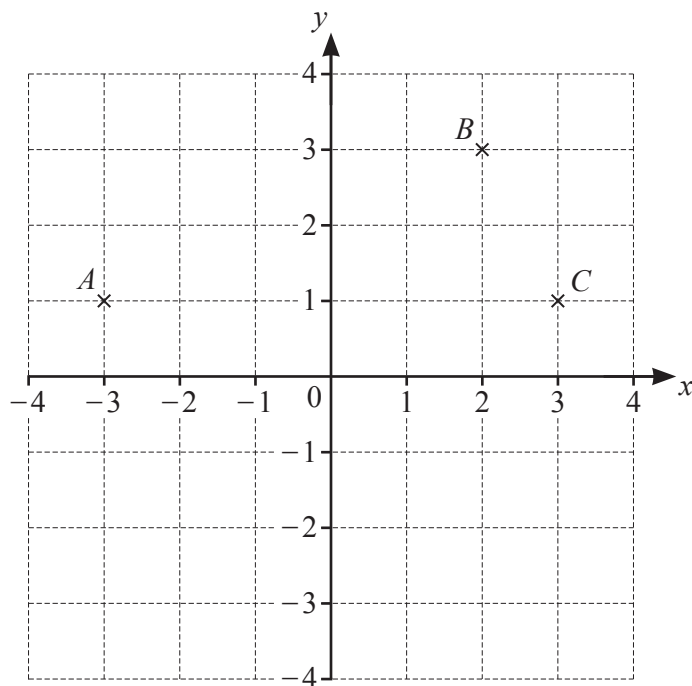
(a) a square number greater than 10,

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

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

- 14 Rovers, United and City are football teams.

Rovers scored  $x$  goals.

United scored 8 goals more than Rovers.

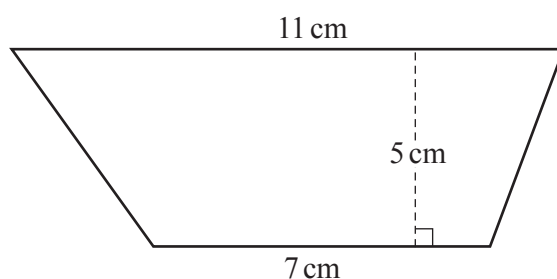
City scored 3 goals less than twice the number of goals scored by Rovers.

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

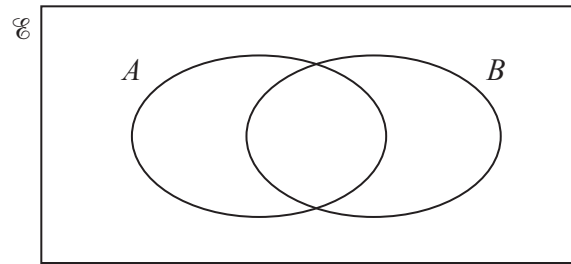


NOT TO  
SCALE

Calculate the area of the trapezium.

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

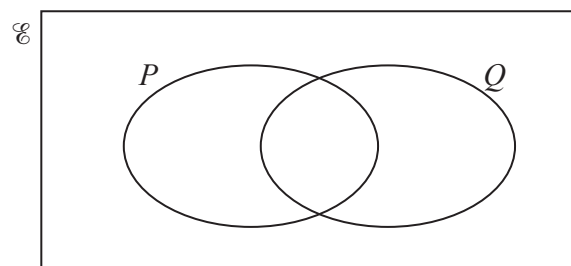
16 (a)



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

[1]

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



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.

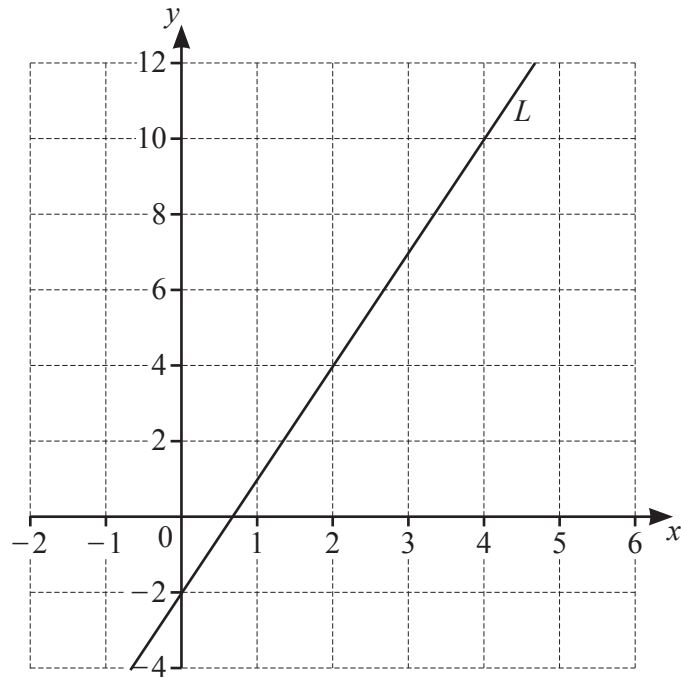
..... [2]

(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]

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