Cambridge IGCSE

Cambridge Assessment International Education
Cambridge International General Certificate of Secondary Education

CANDIDATE NAME

CENTRE NUMBER | | | | | |

CANDIDATE NUMBER | | | | |

5833866960

MATHEMATICS **0580/11**

Paper 1 (Core) **October/November 2019**

1 hour

Candidates answer on the Question Paper.

Additional Materials: Electronic calculator
Tracing paper (optional)
Geometrical instruments

READ THESE INSTRUCTIONS FIRST

Write your centre number, candidate number and name on all the work you hand in.
Write in dark blue or black pen.
You may use an HB pencil for any diagrams or graphs.
Do not use staples, paper clips, glue or correction fluid.
DO **NOT** WRITE IN ANY BARCODES.

Answer **all** questions.
If working is needed for any question it must be shown below that question.
Electronic calculators should be used.
If the degree of accuracy is not specified in the question, and if the answer is not exact, give the answer to three significant figures. Give answers in degrees to one decimal place.
For π, use either your calculator value or 3.142.

At the end of the examination, fasten all your work securely together.
The number of marks is given in brackets [ ] at the end of each question or part question.
The total of the marks for this paper is 56.

This document consists of **10** printed pages and **2** blank pages.

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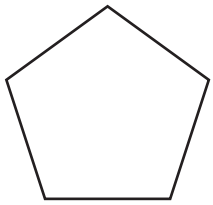
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[Turn over

1 Change 4.6 metres to centimetres.

..... cm [1]

2



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

..... [1]

3 Work out 5% of $25.

$ ..... [1]

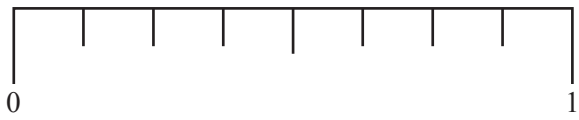
4 Factorise $5p + pt$.

..... [1]

5 Rui has a bag containing 5 black pens, 8 red pens and 3 blue pens only.
He takes a pen out of the bag at random.

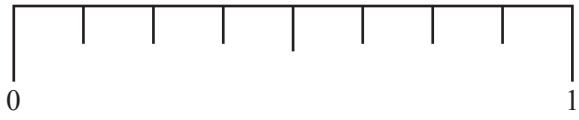
Draw an arrow (↓) on the probability scale to show the probability that Rui takes

(a) a red pen,



[1]

(b) a red pen or a blue pen.



[1]

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6 **(a)** Write 8473 correct to the nearest ten.

..... [1]

(b) Write 16.086 correct to 2 decimal places.

..... [1]

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

$\frac{9}{19}$ $\frac{3}{7}$ 37% 0.43

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

8

The diagram shows the base of a triangle.
The lengths of the other two sides are 6 cm and 4 cm.

Using a ruler and compasses only, construct the other two sides of the triangle.
Show all your construction arcs. [2]

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9 Calculate.

$$\frac{16.379 - 0.879}{4.2} \times 1.241$$

Give your answer correct to 2 significant figures.

..... [2]

10 Share 518 in the ratio 2 : 5.

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

11 Write 15 060

(a) in words,

..... [1]

(b) in standard form.

..... [1]

12 Simplify $5c - d - 3d - 2c$.

..... [2]

13 Calculate the area of a circle with radius 12 cm.

..... cm^2 [2]

14 Levante changes 24 650 Hungarian forints to dollars.
The exchange rate is \$1 = 290 forints.

Calculate how many dollars Levante receives.

\$ ..... [2]

15 Paula invests \$600 at a rate of r% per year simple interest.
At the end of 10 years, the total interest earned is \$90.

Find the value of r.

r = ... [2]

16 **Without using a calculator**, work out $\frac{5}{16} \times 1\frac{1}{7}$.

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

..... [2]

17 Simplify $2x^3 \times 3x^2$.

..... [2]

18 Complete the table.

Fraction		Decimal		Percentage
$\frac{3}{4}$	=	0.75	=	
	=	0.2	=	20%
$\frac{2}{25}$	=		=	8%

[3]

19

27 14 8 93 32 55 14 38 73 47

From this list of numbers find

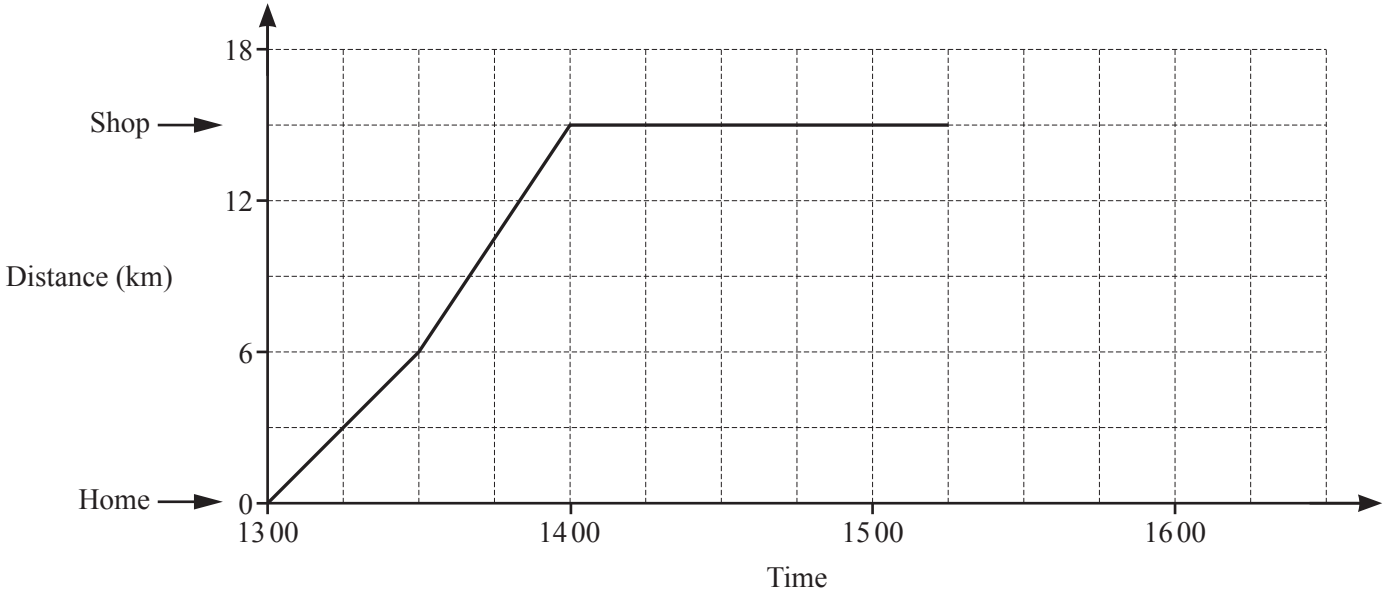
(a) the median,

..... [2]

(b) the range.

..... [1]

20 Juan travels from his home to a shop.
The travel graph shows his journey.



(a) Find the distance Juan travels to the shop.

..... km [1]

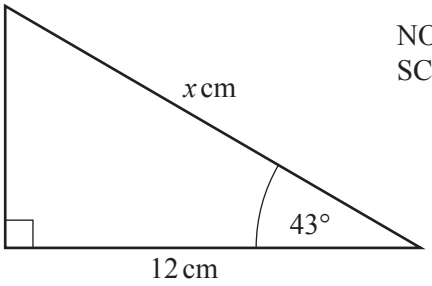
(b) Write down what happens at 14 00.

..... [1]

(c) Juan travels home at a constant speed of 15 km/h.
He leaves the shop at 15 15.

Complete the travel graph. [1]

21



Use trigonometry to calculate the value of x.

$x =$ ..... [3]

22 Solve.

(a) $8(w+11) = 120$

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

(b) $\frac{x-2}{3} = 3$

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

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23 Solve the simultaneous equations.
You must show all your working.

$$5x + 4y = 10$$
$$7x - 6y = 43$$

$x =$ .....

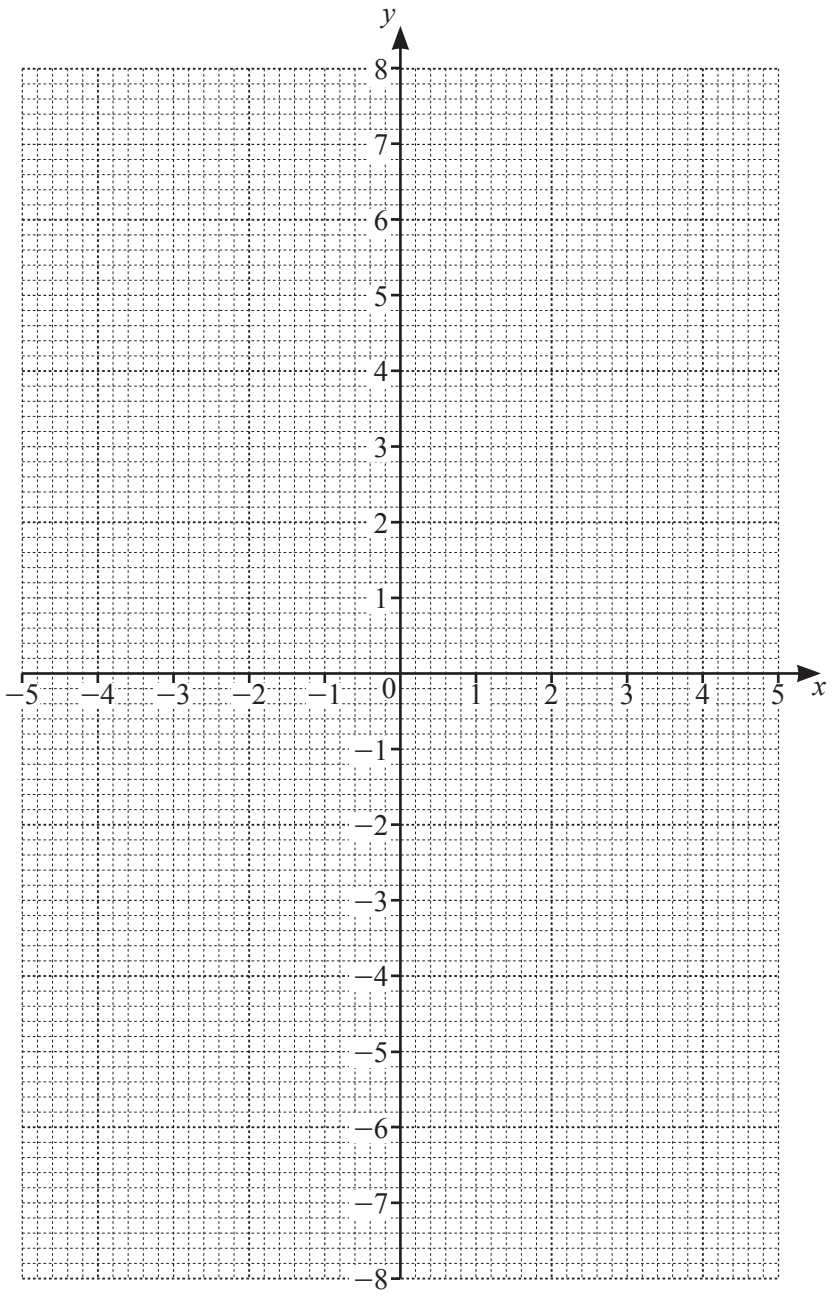
$y =$ ..... [4]

24 **(a)** Complete the table of values for $y = \frac{8}{x}$.

x	−5	−4	−3	−2	−1		1	2	3	4	5
y		−2	−2.7	−4	−8		8	4	2.7		

[2]

(b) On the grid, draw the graph of $y = \frac{8}{x}$ for $-5 \leqslant x \leqslant -1$ and $1 \leqslant x \leqslant 5$.



[4]

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