



**Cambridge Assessment International Education**  
Cambridge International General Certificate of Secondary Education (9–1)

CANDIDATE  
NAME

CENTRE  
NUMBER

--	--	--	--	--

CANDIDATE  
NUMBER

--	--	--	--



**MATHEMATICS**

**0980/11**

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  $\pi$ , 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.

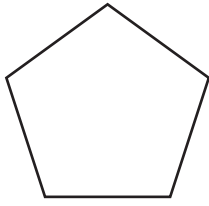
The total of the marks for this paper is 56.

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

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]

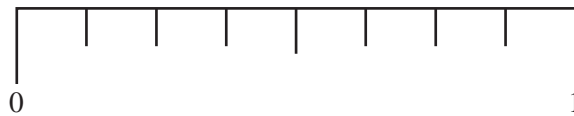
4 Factorise  $5p + pt$ .

..... [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.

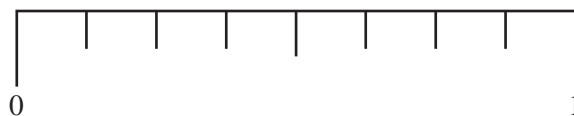
Draw an arrow ( $\downarrow$ ) on the probability scale to show the probability that Rui takes

(a) a red pen,



[1]

(b) a red pen or a blue pen.



[1]

3

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.

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

..... < ..... < ..... < ..... [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]

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<sup>2</sup> [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

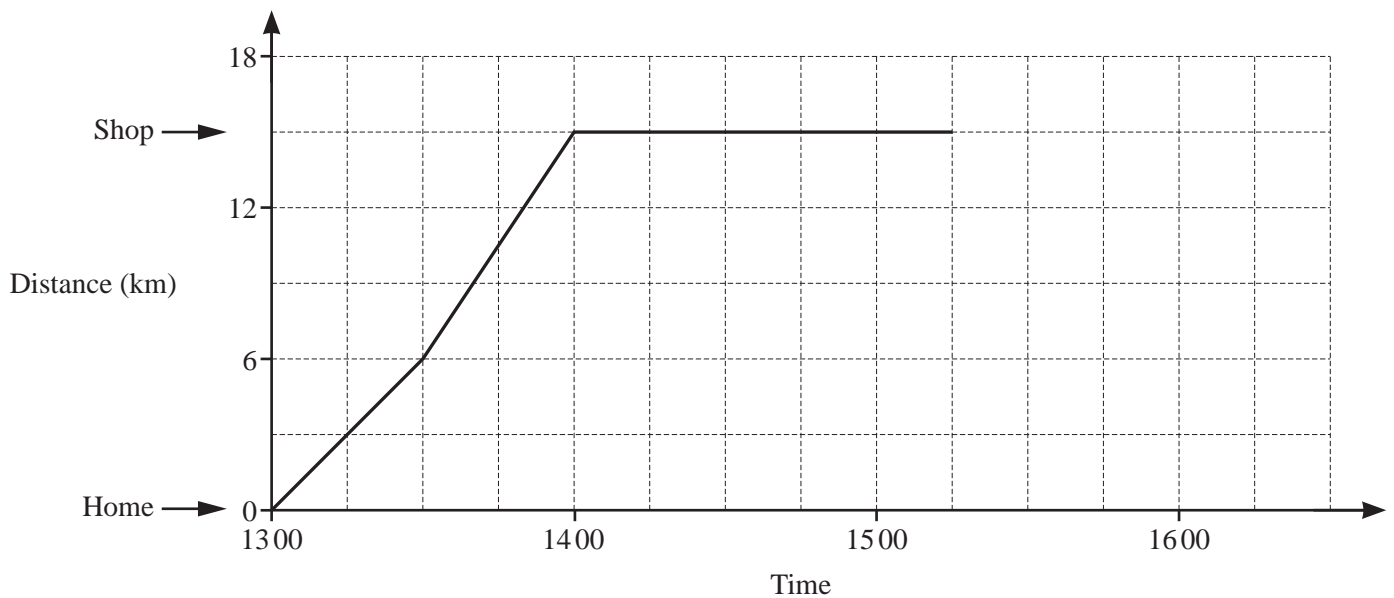
(a) the median,

..... [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 1400.

..... [1]

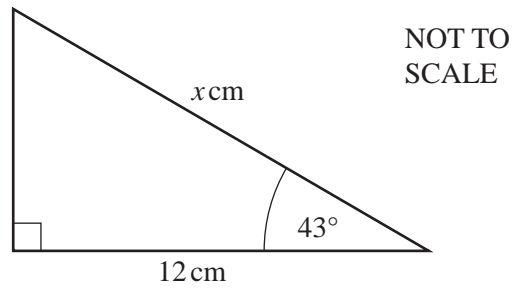
(c) Juan travels home at a constant speed of 15 km/h.  
He leaves the shop at 15 15.

Complete the travel graph.

[1]

8

21



Use trigonometry to calculate the value of  $x$ .

$$x = \dots\dots\dots [3]$$

22 Solve.

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

$$w = \dots\dots\dots [2]$$

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

$$x = \dots\dots\dots [2]$$



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

$$5x + 4y = 10$$

$$7x - 6y = 43$$

$$x = \dots\dots\dots$$

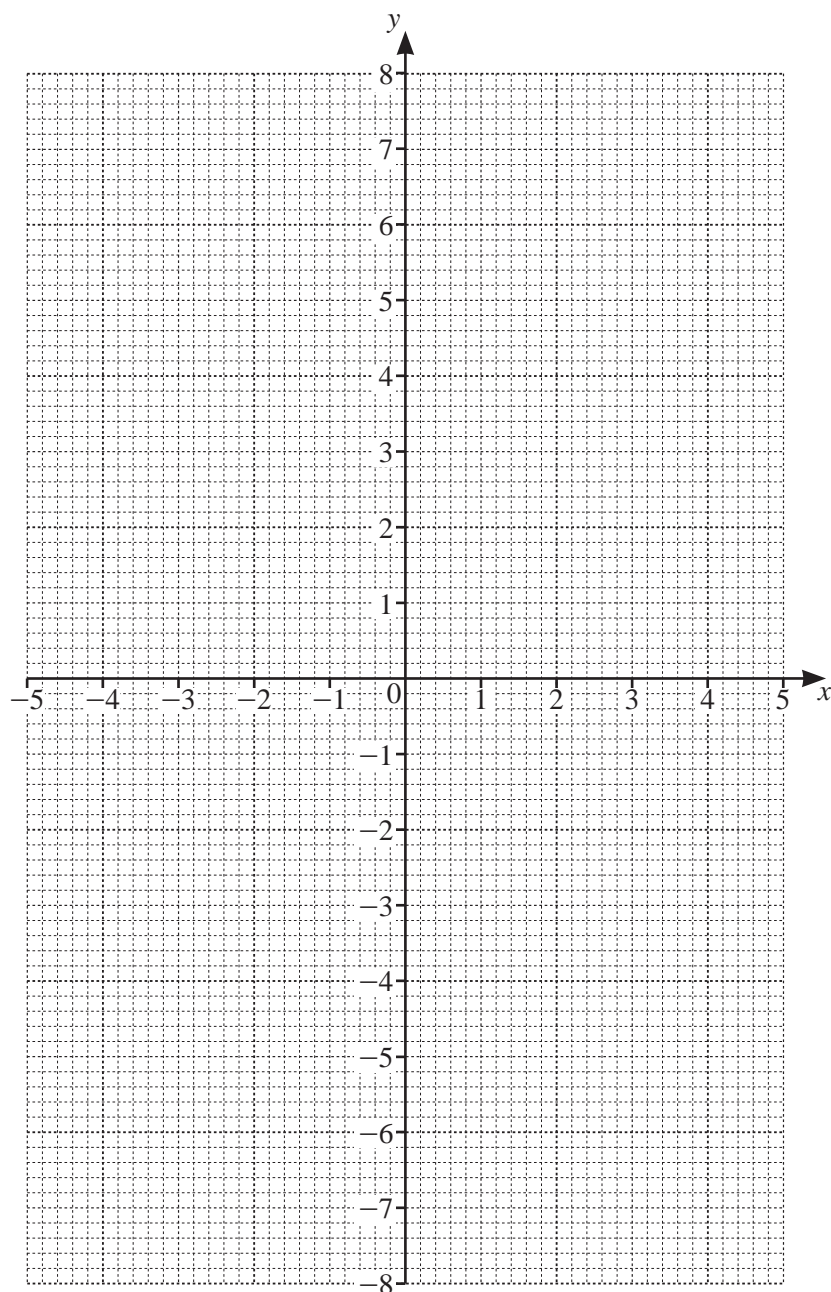
$$y = \dots\dots\dots [4]$$

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  $-5 \leq x \leq -1$  and  $1 \leq x \leq 5$ .



[4]



**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.