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0580/11

October/November 2019

1 hour

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

READ THESE INSTRUCTIONS FIRST

DO **NOT** WRITE IN ANY BARCODES.

For π , use either your calculator value or 3.142.

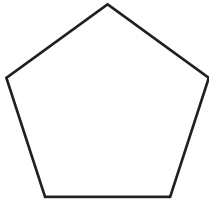
The total of the marks for this paper is 56.

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]

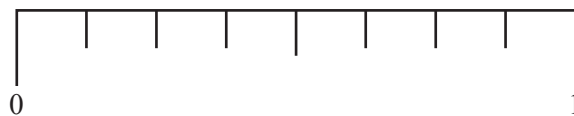
- 4 Factorise $5p + pt$.

..... [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.

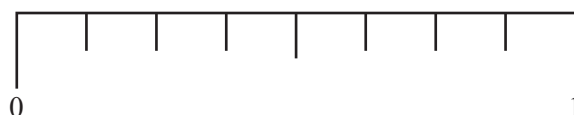
Draw an arrow ($\downarrow$) on the probability scale to show the probability that Rui takes

- (a) a red pen,



[1]

- (b) a red pen or a blue pen.



[1]

- 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^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

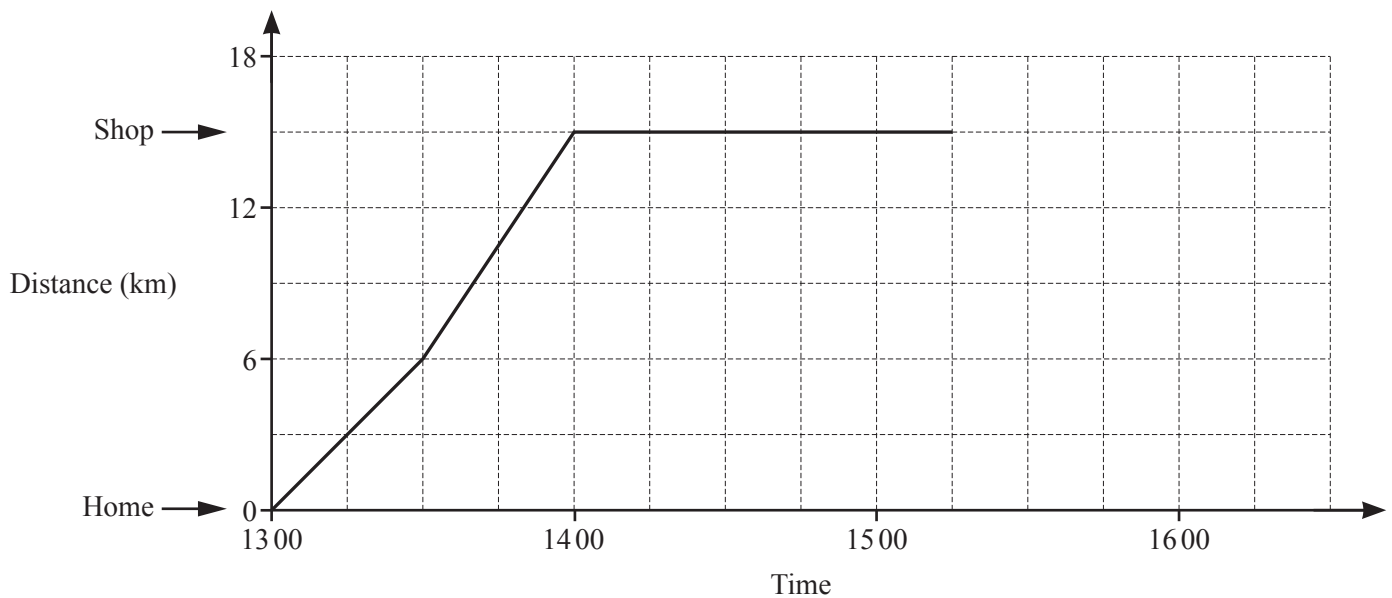
(a) the median,

..... [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.

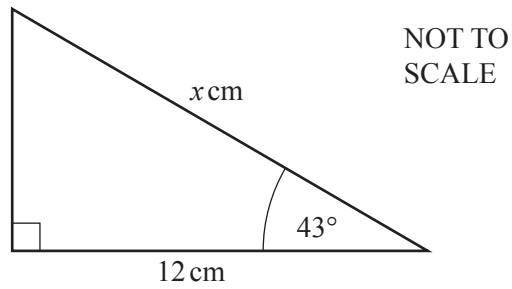
..... [1]

(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 .

$x = \dots\dots\dots$ [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.

$$5x + 4y = 10$$

$$7x - 6y = 43$$

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

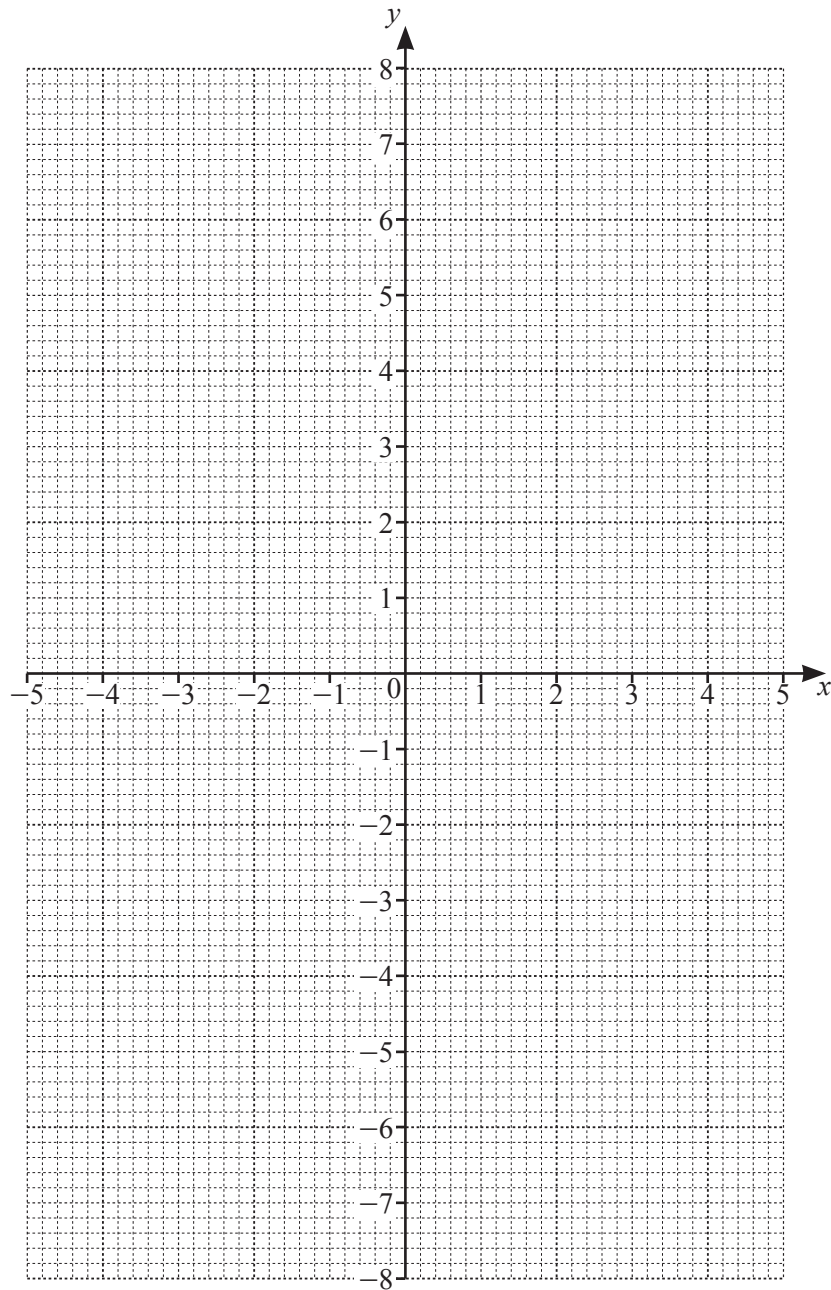
$$y = \dots\dots\dots [4]$$

- 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]

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