Cambridge IGCSE[™]

CANDIDATE NAME					
CENTRE NUMBER			CANDIDATE NUMBER		



MATHEMATICS 0580/11

Paper 1 (Core) October/November 2022

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 π , 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. Any blank pages are indicated.

1	Write the number two million eight hundred and forty thousand three hundred and twenty-seven in figures.
	[1]
2	
	Write down the mathematical name of this type of angle. [1]
3	
	(a) Measure the length of this line in millimetres.
	(b) Draw a line perpendicular to this line. [1]

In triangle PQR, PR = 5 cm and QR = 4 cm.

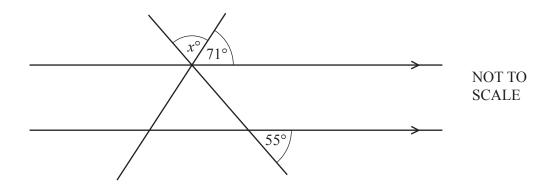
Leave in your construction arcs.

Using a ruler and compasses only, construct triangle PQR.

4

Write down a common multiple of 18 and 24. Write 32 cm as a fraction of 2 m. Give your answer in its simplest form. The temperature, in °C, is recorded at the same time in six cities. London Helsinki Oslo Paris Madrid Berlin 6 -2 -5 7 9 2							
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	Write 32 cm and Give your and The temperate London 6	ure, in °C, is	of 2 m. implest for s recorded sinki -2	rm. Oslo -5	Paris	Madrid 9	Berlin 2

8



The diagram shows two straight lines intersecting two parallel lines.

Find the value of x.

$$x =$$
 [2]

9 Divide \$200 in the ratio 7:3.

3.7

10 The birth weights, in kg, of 11 babies are recorded.

2.1 1.6 2.7 4.2 4.0 2.2 3.1 1.7 2.6 3.3

(a) Complete the stem-and-leaf diagram to show this information.

1	
2	
3	
4	

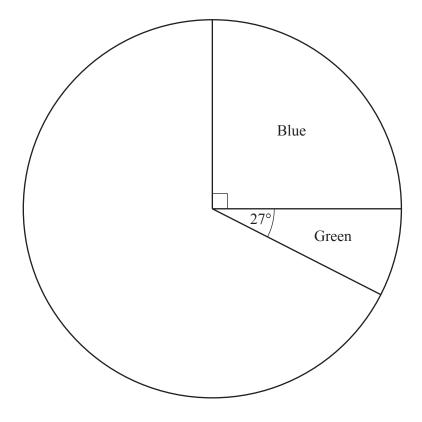
Key: 2 | 1 represents 2.1 kg

[2]

(b) Find the median.

..... kg [1]

11 Victoria records the colour of each of 240 cars leaving a car park. Some of this information is shown in the pie chart.



(a) Show that 60 cars are blue.

[1]

(b) The rest of the cars are either red or white. 110 cars are red.

Complete the pie chart to show this information.

[2]

12	The price of a computer is \$520. This price is reduced by 15% in a sale.	
	Work out the sale price.	
	\$	[2]
13	Without using a calculator, work out $\frac{1}{3} + \frac{5}{6}$.	
	You must show all your working and give your answer as a mixed number in its simplest form.	
		[2]
14	Mario tests new cars. The probability that a car is faulty is 0.04.	
	(a) Find the probability that a car is not faulty.	
		[1]
	(b) In one week Mario tests 850 cars.	
	Find the number of cars that are expected to be faulty.	
		[2]

15 A café sells 330 sandwiches. This is $\frac{11}{14}$ of the sandwiches they make.

Work out the number of sandwiches the café makes.

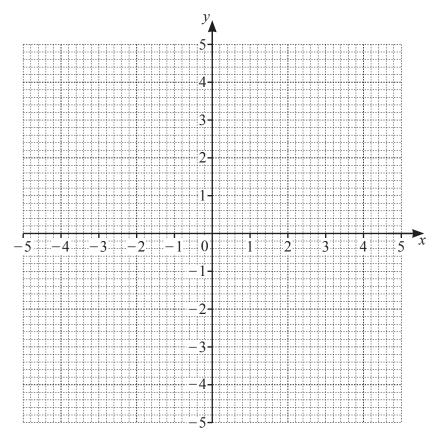
.....[2]

16 (a) Complete the table of values for $y = \frac{5}{x}$.

х	-5	-4	-2.5	-2	-1	1	2	2.5	4	5
у	-1		-2	-2.5	-5	5	2.5	2		1

[2]

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



[4]

17 (a) 3, 9, 27, 81, ...

Write down the term to term rule for this sequence.

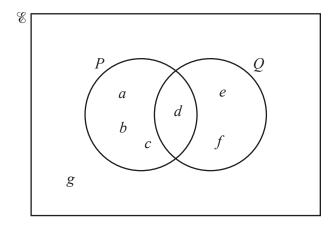
		[1]
--	--	-----

(b) 13, 17, 21, 25, ...

Find the *n*th term of this sequence.



18



The Venn diagram shows the elements of the sets \mathscr{E} , P and Q.

Complete the statements.

(a)
$$P = \{ \dots \}$$
 [1]

(b)
$$n(P \cup Q) = \dots$$
 [1]

19 The bearing of A from B is 137° .

Find the bearing of B from A.

.....[2]

q

20	(0)	Write 0.00272	in	atondord	form
4 0	(a)	Write 0.00273	ın	standard	iorm.

111
L-1

(b) Sam has to answer this question.

Calculate
$$9306 \times 4532$$
.

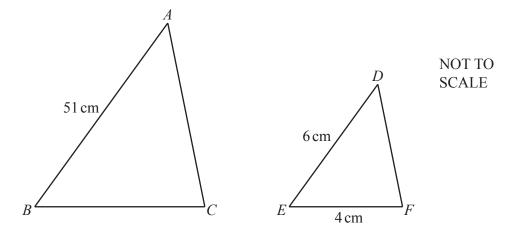
Give your answer in standard form correct to 3 significant figures.

Sam writes 42.1×10^6 as his answer to this question.

What two errors has Sam made?

T 1	
Hrror I	

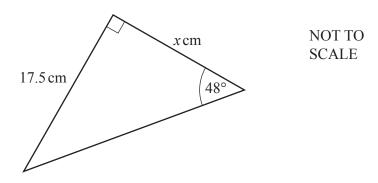
21



Triangle ABC is mathematically similar to triangle DEF.

Find BC.

$$BC = \dots cm [2]$$



The diagram shows a right-angled triangle.

Show that the value of *x* is 15.8, correct to 3 significant figures.

[3]

Natalie buys 4 tomato plants and 3 pepper plants for \$9.35 . Samir buys 2 tomato plants and 11 pepper plants for \$16.55 .

Write down a pair of simultaneous equations and solve them to find the cost of one tomato plant and the cost of one pepper plant.

You must show all your working.

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