



## Cambridge IGCSE™

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## MATHEMATICS

0580/13

Paper 1 (Core)

October/November 2024

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  $\pi$ , 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 6475 correct to the nearest ten.

..... [1]

- 2 Write 0.75 as a fraction.

..... [1]

- 3 A piece of string has length 65.1 cm.  
The string is cut into 7 equal pieces.

Find the length of each piece.

.....cm [1]

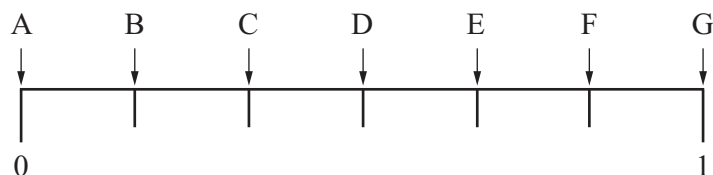
- 4 

7	19	8	12	3	12	9	7	12
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Find the mode of these numbers.

..... [1]

- 5 A bag contains 6 red balls, 4 green balls and 2 blue balls.  
Zia takes a ball from the bag at random.



Write down the letter from the probability scale that shows the probability that

- (a) Zia takes a green ball

..... [1]

- (b) Zia takes a yellow ball

..... [1]

- (c) Zia does **not** take a blue ball.

..... [1]





6 These are the first four terms of a sequence.

19    26    33    40

(a) (i) Find the next term.

..... [1]

(ii) Write down the term to term rule for this sequence.

..... [1]

(b) These are the first four terms of another sequence.

-1    2    5    8

Find the  $n$ th term of this sequence.

..... [2]

7 Simplify.

$$3p - t - p - 4t$$

..... [2]

8

61	62	63	64	65	66	67	68	69
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From the list of numbers, write down

(a) a cube number

..... [1]

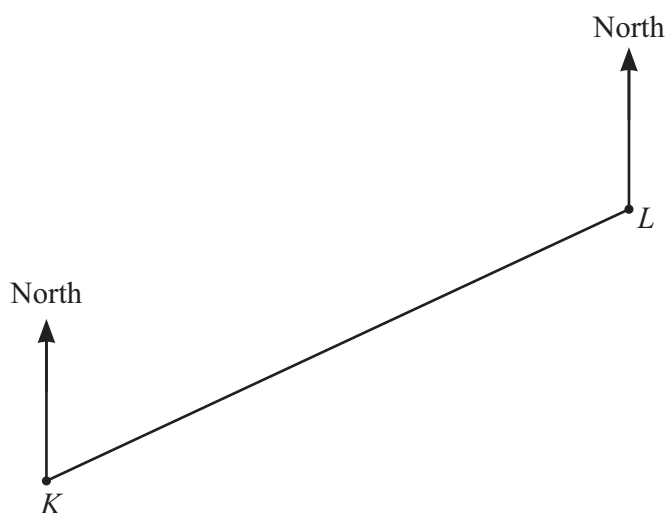
(b) a prime number.

..... [1]





- 9 The scale drawing shows the positions of town  $K$  and town  $L$ .  
The scale is 1 cm represents 10 km.



Scale : 1 cm to 10 km

- (a) Find the actual distance between town  $K$  and town  $L$ .

..... km [2]

- (b) Measure the bearing of town  $L$  from town  $K$ .

..... [1]

- (c) Town  $M$  is 40 km from town  $L$  on a bearing of  $140^\circ$ .

On the scale drawing, mark the position of town  $M$ .

[2]



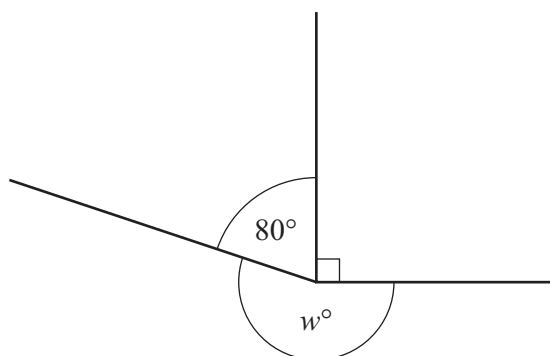


- 10 The surface area of a cube is  $121.5 \text{ cm}^2$ .

Calculate the length of one side of the cube.

..... cm [2]

- 11 (a)



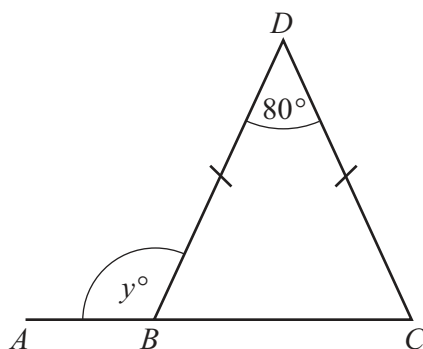
NOT TO  
SCALE

The diagram shows three lines meeting at a point.

Find the value of  $w$ .

$w =$  ..... [1]

- (b)



NOT TO  
SCALE

$BCD$  is an isosceles triangle.

$ABC$  is a straight line.

Work out the value of  $y$ .

$y =$  ..... [3]





12 Write down the equation of a line parallel to the line  $y = 2x$ .

..... [1]

13 Each student in a class of 20 students records the number of coins in their pockets.  
The table shows the results.

Number of coins	0	1	2	3	4	5	6
Frequency	3	1	7	8	0	0	1

(a) Find the median.

..... [1]

(b) Calculate the mean.

..... [3]

14 Expand  $4(x - 3)$ .

..... [1]

15 Find the size of an interior angle of a regular 15-sided polygon.

..... [2]





- 16 Rio buys some pens.  
He sells 63 pens, which is  $\frac{7}{9}$  of the pens he buys.

Work out how many pens he buys.

..... [2]

- 17 Ed has  $n$  books.  
Sam has 3 times as many books as Ed  
Jane has 2 books fewer than Sam.  
The total number of books is 54.

Use this information to write down an equation and solve it to find the value of  $n$ .

$n =$  ..... [4]

- 18 **Without using a calculator**, work out  $2\frac{1}{4} - 1\frac{11}{12}$ .

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

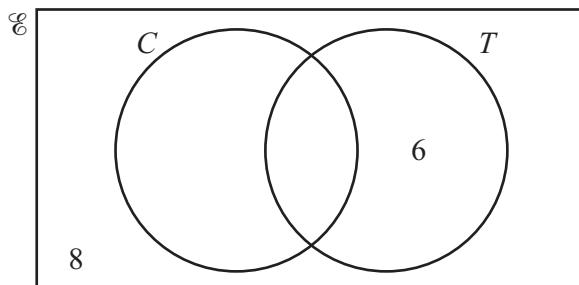
..... [3]





- 19  $\mathcal{C} = \{\text{workers in an office}\}$   
 $C = \{\text{workers who drink coffee}\}$   
 $T = \{\text{workers who drink tea}\}$

47 people work in the office.  
 32 people drink tea.



(a) Complete the Venn diagram. [2]

(b) Write down  $n(C \cap T)$ . [1]

.....

(c) Work out the probability that a worker chosen at random does **not** drink coffee. [1]

.....





- 20 The weight,  $w$  grams, of a box is 463.9 grams, correct to 1 decimal place.

Complete the statement about the value of  $w$ .

$$\dots\dots\dots \leq w < \dots\dots\dots [2]$$

- 21 Calculate  $(6.4 \times 10^5) \div (2.5 \times 10^{-7})$ .  
Give your answer in standard form.

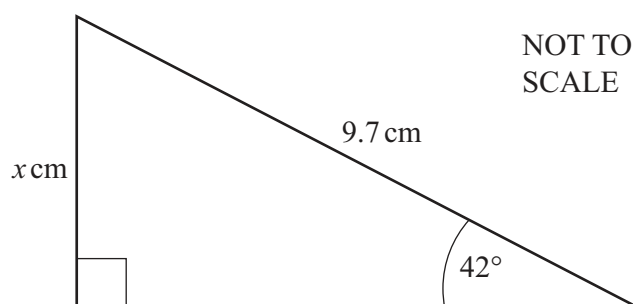
$$\dots\dots\dots [1]$$

- 22 Mia invests \$1270 for 5 years at a rate of 2.1% per year compound interest.

Calculate the value of her investment at the end of the 5 years.

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

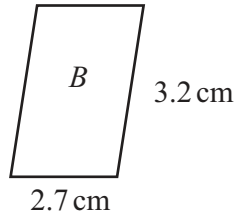
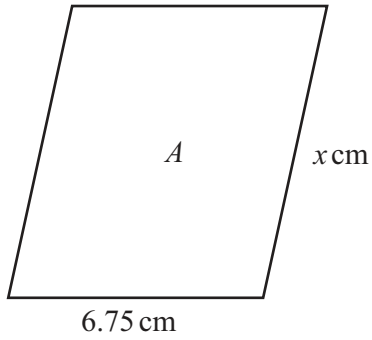
23



The diagram shows a right-angled triangle.

Calculate the value of  $x$ .

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



NOT TO  
SCALE

Shape  $A$  is mathematically similar to shape  $B$ .

Calculate the value of  $x$ .

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





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