Cambridge Assessment International Education

# Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER



**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.




[Turn over

**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]

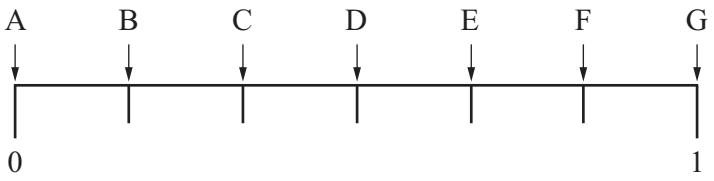
**4**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7 | 19 | 8 | 12 | 3 | 12 | 9 | 7 | 12 |

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 |
|---|---|---|---|---|---|---|---|---|

From the list of numbers, write down

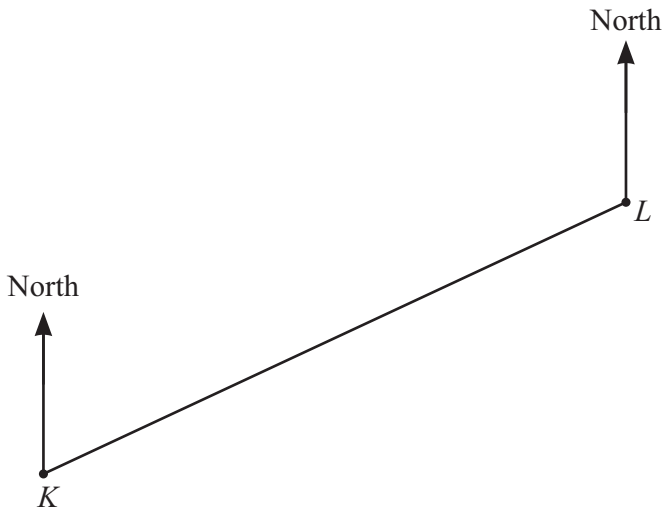
**(a)** a cube number

..... [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°.

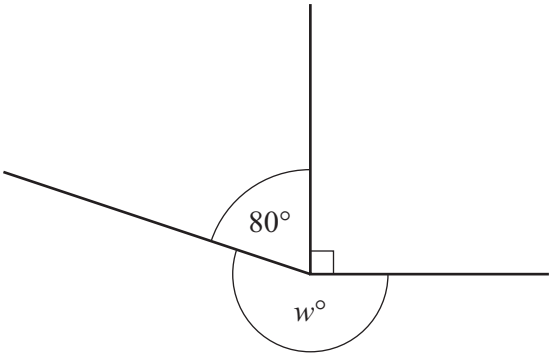
On the scale drawing, mark the position of town $M$. [2]

**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)**



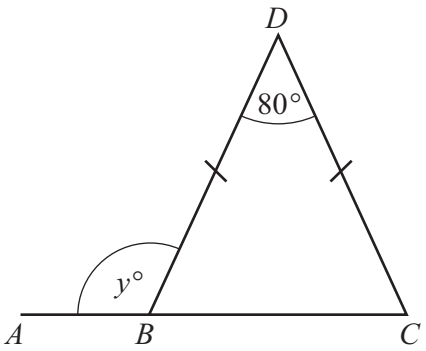

NOT TO SCALE

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]

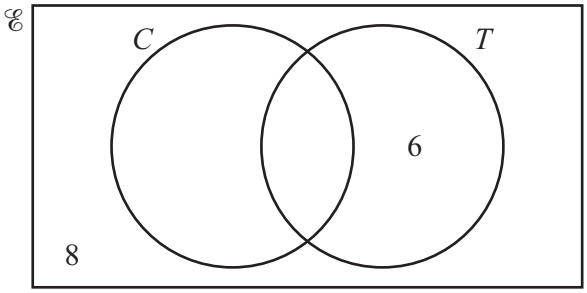
**18** **Without using a calculator**, work out $2\frac{1}{4} - 1\frac{11}{12}$.

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

..... [3]

**19** $\mathscr{E}$ = {workers in an office}
$C$ = {workers who drink coffee}
$T$ = {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 $w$.

..... $\leqslant w <$ ..... [2]

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

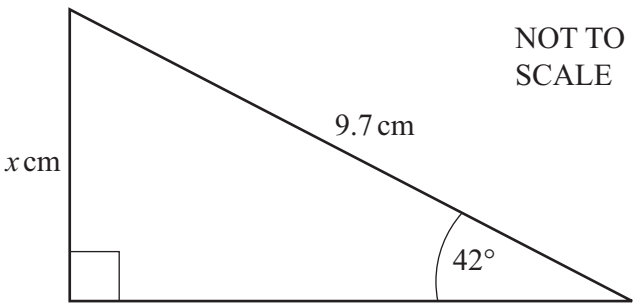
..... [1]

**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.

\$ ..... [2]

**23**

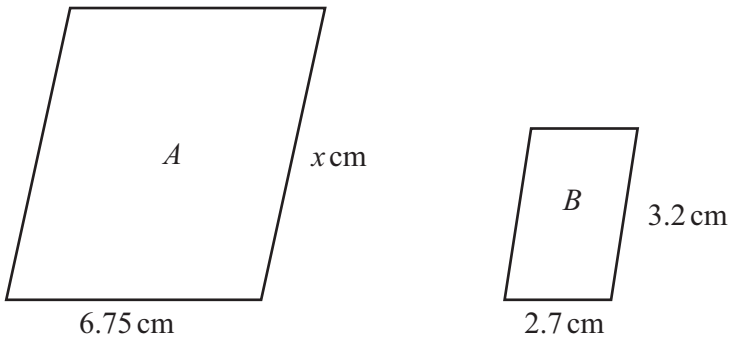



The diagram shows a right-angled triangle.

Calculate the value of $x$.

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

**24**




NOT TO SCALE

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

Calculate the value of $x$.

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

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