



# Cambridge IGCSE™

CANDIDATE NAME



CENTRE NUMBER

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CANDIDATE NUMBER

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**CAMBRIDGE INTERNATIONAL MATHEMATICS**

**0607/11**

Paper 1 (Core)

**October/November 2024**

**45 minutes**

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.
- Calculators must **not** be used in this paper.
- You may use tracing paper.
- You must show all necessary working clearly and you will be given marks for correct methods even if your answer is incorrect.
- All answers should be given in their simplest form.

## INFORMATION

- The total mark for this paper is 40.
- The number of marks for each question or part question is shown in brackets [ ].

This document has 8 pages.



**Formula List**

Area,  $A$ , of triangle, base  $b$ , height  $h$ .

$$A = \frac{1}{2}bh$$

Area,  $A$ , of circle, radius  $r$ .

$$A = \pi r^2$$

Circumference,  $C$ , of circle, radius  $r$ .

$$C = 2\pi r$$

Curved surface area,  $A$ , of cylinder of radius  $r$ , height  $h$ .

$$A = 2\pi rh$$

Curved surface area,  $A$ , of cone of radius  $r$ , sloping edge  $l$ .

$$A = \pi rl$$

Curved surface area,  $A$ , of sphere of radius  $r$ .

$$A = 4\pi r^2$$

Volume,  $V$ , of prism, cross-sectional area  $A$ , length  $l$ .

$$V = Al$$

Volume,  $V$ , of pyramid, base area  $A$ , height  $h$ .

$$V = \frac{1}{3}Ah$$

Volume,  $V$ , of cylinder of radius  $r$ , height  $h$ .

$$V = \pi r^2 h$$

Volume,  $V$ , of cone of radius  $r$ , height  $h$ .

$$V = \frac{1}{3}\pi r^2 h$$

Volume,  $V$ , of sphere of radius  $r$ .

$$V = \frac{4}{3}\pi r^3$$





Answer **all** the questions.

1 Write down the value of the square root of 64.

..... [1]

2 Complete the table to show how 400 students travel to school.

|         | Year 10 | Year 11 | Total |
|---------|---------|---------|-------|
| Walk    | 70      |         | 85    |
| Bicycle |         | 20      | 85    |
| Bus     | 85      | 40      |       |
| Car     |         | 25      | 105   |
| Total   | 300     |         | 400   |

[3]

3 The cost of printing leaflets can be found using this formula.

$$\text{Cost of printing} = \text{price per leaflet} \times \text{number of leaflets} + \text{fixed charge}$$

The price per leaflet is \$0.30 and the fixed charge is \$65.

Work out the cost of printing 1000 leaflets.

\$ ..... [2]

4 Write 0.07 as a percentage.

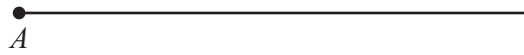
..... % [1]



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5 Draw an angle of  $126^\circ$  at  $A$ .



[1]

6 Change 1420 millilitres into litres.

..... litres [1]

7 Malik records the number of students in each class at his school.

Put a ring around the word that describes this type of data.

continuous          cumulative          discrete          random

[1]

8 Work out the mode and the range of these numbers.

38   44   44   52   52   52   66   68

Mode .....

Range ..... [2]

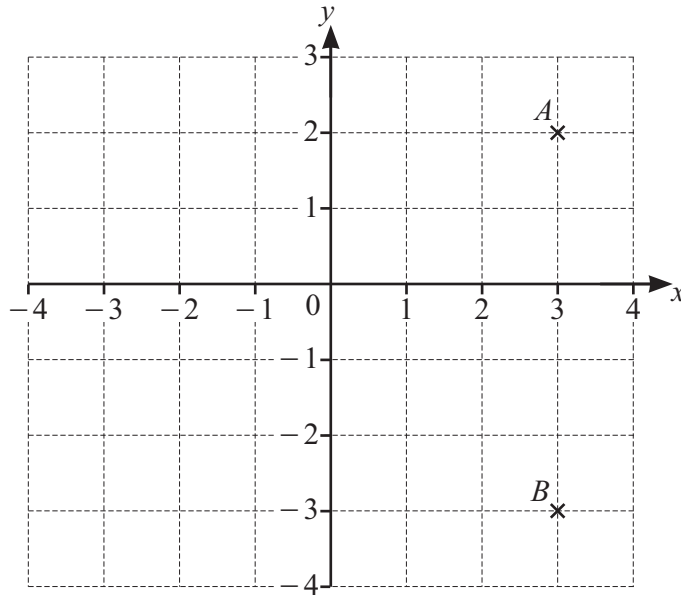
9 Write down a common multiple of 8 and 12.

..... [1]





10 Points *A* and *B* are plotted on a 1 cm<sup>2</sup> grid.



Find the distance from *A* to *B*.

..... cm [1]

11 The probability that Sylvia wins a competition is 0.38 .

Find the probability that Sylvia does not win the competition.

..... [1]

12 Solve the equation.

$$2x - 1 = 7$$

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

13 Write  $2 \times 2 \times 2 \times 2$  as a power of 2.

..... [1]

14 Solve the inequality.

$$6x \geq 42$$

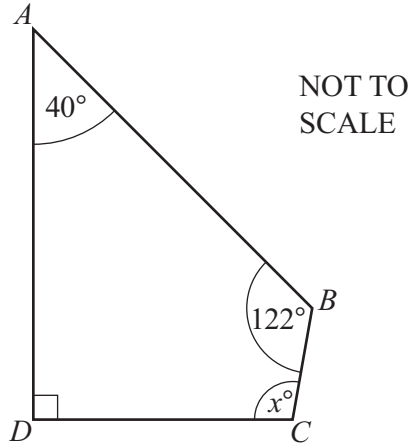
..... [1]



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15



The diagram shows the quadrilateral  $ABCD$ .

Find the value of  $x$ .

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

16 Simplify fully.

$$\frac{3a}{5} \times \frac{b}{2a}$$

$\dots\dots\dots$  [2]

17  $X = \{0, 1, 2, 3, 4, 5, 6\}$   
 $Y = \{\text{positive even numbers less than } 8\}$

Complete the following statements using set notation.

$Y \dots\dots\dots X$

$5 \dots\dots\dots Y$

[2]

18 Multiply out.

$$8(m - 3)$$

$\dots\dots\dots$  [1]





19 Write down all the prime factors of 30.

..... [2]

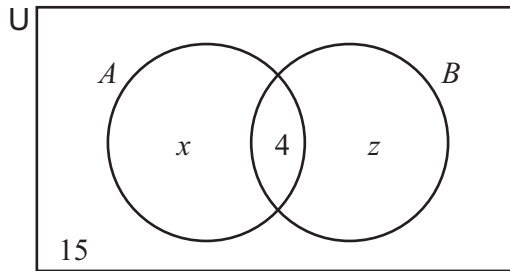
20 Solve the simultaneous equations.

$$\begin{aligned} 3p + 2q &= 29 \\ 5p - 2q &= 27 \end{aligned}$$

$p =$  .....

$q =$  ..... [2]

21 A group of students are asked whether they like athletics ( $A$ ) or basketball ( $B$ ).  
The Venn diagram shows the number of students in each subset.



$$n(U) = 30 \quad n(A) = 9$$

(a) Find the value of  $x$ .

$x =$  ..... [1]

(b) Find the value of  $z$ .

$z =$  ..... [1]

22 Work out  $\frac{5 \times 10^7}{2 \times 10^3}$ .

Give your answer in standard form.

..... [2]

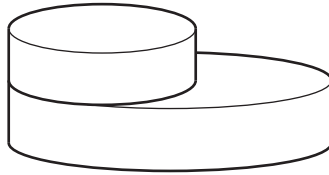
Questions 23 and 24 are printed on the next page.



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23



NOT TO SCALE

A sculpture is made from two cylinders.  
The height of each cylinder is 0.5 m.  
The diameter of the larger cylinder is 4 m and the diameter of the smaller cylinder is 2 m.

Work out the volume of the sculpture.  
Give your answer in terms of  $\pi$ .

..... m<sup>3</sup> [3]

24 ▲ is a fraction.

Work out the missing fraction.

$$2\frac{1}{4} \div \blacktriangle = 3$$

$$\blacktriangle = \dots\dots\dots [3]$$

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