Cambridge Assessment International Education

Cambridge IGCSE™

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CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/12**

Paper 1 Non-calculator (Core) **May/June 2025**

1 hour 15 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. You will be given marks for correct methods even if your answer is incorrect.

INFORMATION

- The total mark for this paper is 60.
- The number of marks for each question or part question is shown in brackets [ ].

This document has **12** pages.

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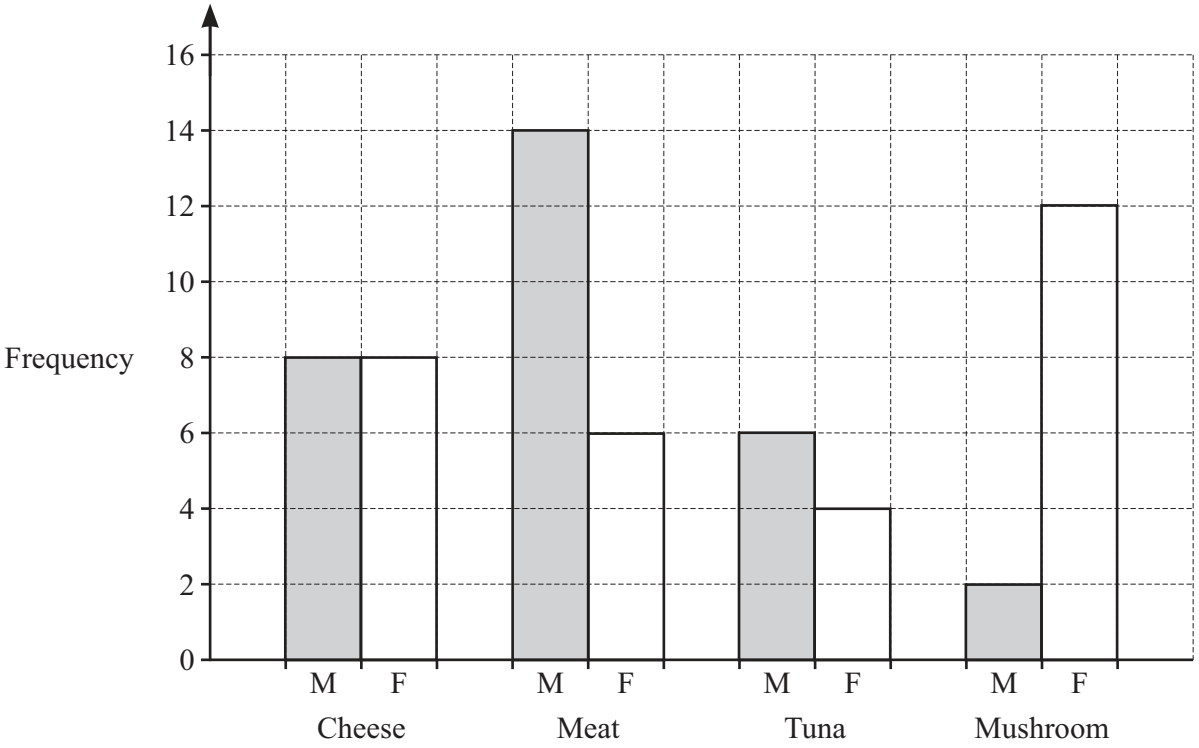
[Turn over

List of formulas

Area, A, of triangle, base b, height h.	$A = \frac{1}{2}bh$
Area, A, of circle of radius r.	$A = \pi r^2$
Circumference, C, of circle of 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.	$A = \pi rl$
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.	$V = \frac{4}{3}\pi r^3$

Calculators must **not** be used in this paper.

1 Luigi asked 30 males (M) and 30 females (F) to choose a pizza.
They choose from cheese, meat, tuna or mushroom.
The results are shown in the bar chart.



(a) Write down the pizza that was chosen most by females.

..... [1]

(b) Find how many more males than females chose meat.

..... [1]

(c) One of the 60 people is chosen at random.

Find the probability that this person chose tuna.

..... [1]

(d) Luigi makes these 60 pizzas.

Find the number of each type of pizza that he makes.
Write these numbers in order, starting with the largest.

.... [2]
largest

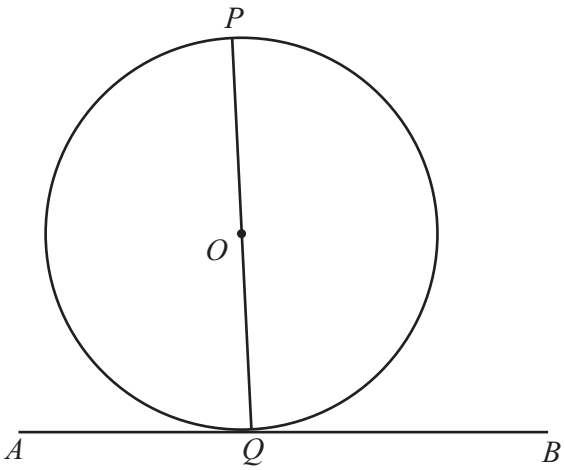
2 **(a)** Write the number 155 000 in words.

..... [1]

(b) Write the number 155 000 in standard form.

..... [1]

3



NOT TO SCALE

P and *Q* are points on the circle, centre *O*.
POQ and *AQB* are straight lines.

(a) Write down the mathematical name for

(i) *PQ*

..... [1]

(ii) *AB*.

..... [1]

(b) Write down the size of angle *OQB*.

Angle *OQB* = ... [1]

4 A bird flies at an average speed of 55 km/h.

Work out how many hours it takes the bird to fly 1100 km.

..... h [2]

5 A boat trip costs \$26 for each adult and \$10 for each child.

Work out the **total** cost for 2 adults and 3 children to go on the boat trip.

\$ ..... [2]

6 Find the value of $\sqrt{196} + 2^3$.

..... [2]

7 Divide 85 in the ratio 2 : 3.

..... , ... [2]

8 These are the first four terms of a sequence.

2 5 10 17

(a) Find the next two terms of the sequence.

..... , ... [2]

(b) Find an expression for the nth term of the sequence.

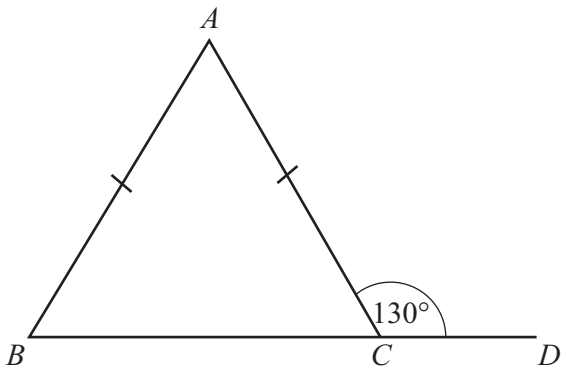
..... [2]

9 By writing each number correct to 1 significant figure, work out an estimate for the value of

$$\frac{3.26 \times 4.91}{2.14 + 2.88}.$$

..... [2]

10



NOT TO SCALE

In triangle ABC, $AB = AC$.
BCD is a straight line.
Angle $ACD = 130°$.

Find angle BAC.

Angle $BAC =$ ..... [2]

11 Solve.

(a) $\frac{x}{5} = 7$

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

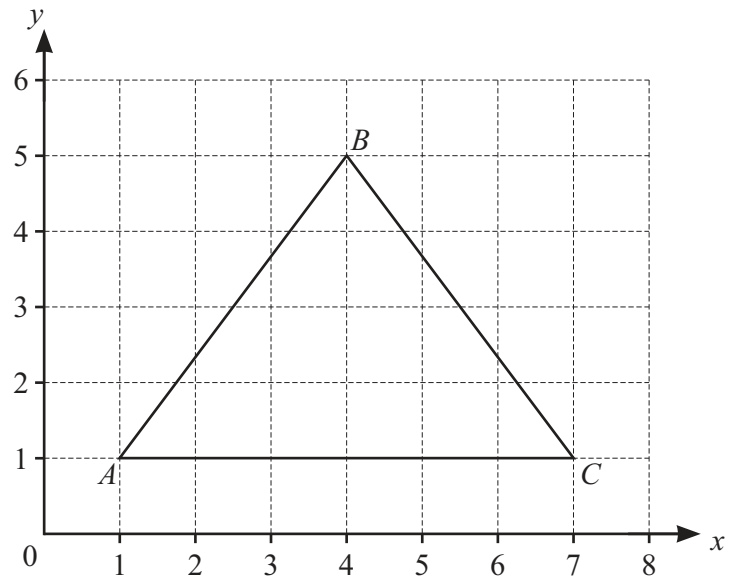
(b) $8x - 3 = -11$

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

(c) $4(3x - 8) = 6x - 29$

$x =$ ..... [3]

12



The diagram shows triangle ABC drawn on a 1 cm^2 grid.

(a) Write down the coordinates of point B. (..... , ...) [1]

(b) For triangle ABC, draw any lines of symmetry. [1]

(c) Work out the area of triangle ABC.

..... cm^2 [2]

(d) (i) Measure AB.

$AB =$ ..... cm [1]

(ii) Find the perimeter of triangle ABC.

..... cm [1]

13 Work out the reciprocal of 0.4 .

..... [2]

14 Simplify.

(a) $3x - y + 2x - 2y$.

..... [2]

(b) $\frac{3x^2}{2x}$.

Give your answer as a fraction.

..... [1]

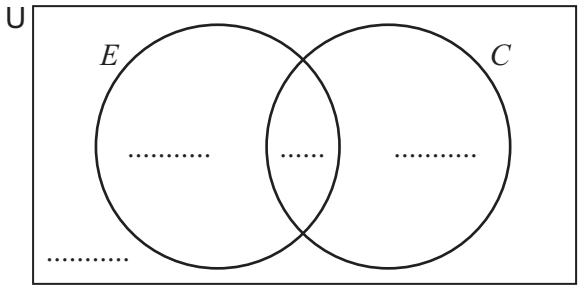
15 A circle has radius r cm.
The area of this circle is 16π cm^2.

Work out the value of r.

$r =$ ..... [2]

16 There are 25 students in a class.
E = {students that eat eggs}
C = {students that eat cereal}
n(E) = 11
n(C) = 13
n($E \cap C$) = 8

(a) Complete the Venn diagram to represent this information.



[2]

(b) Write down the number of students that do not eat eggs and do not eat cereal.

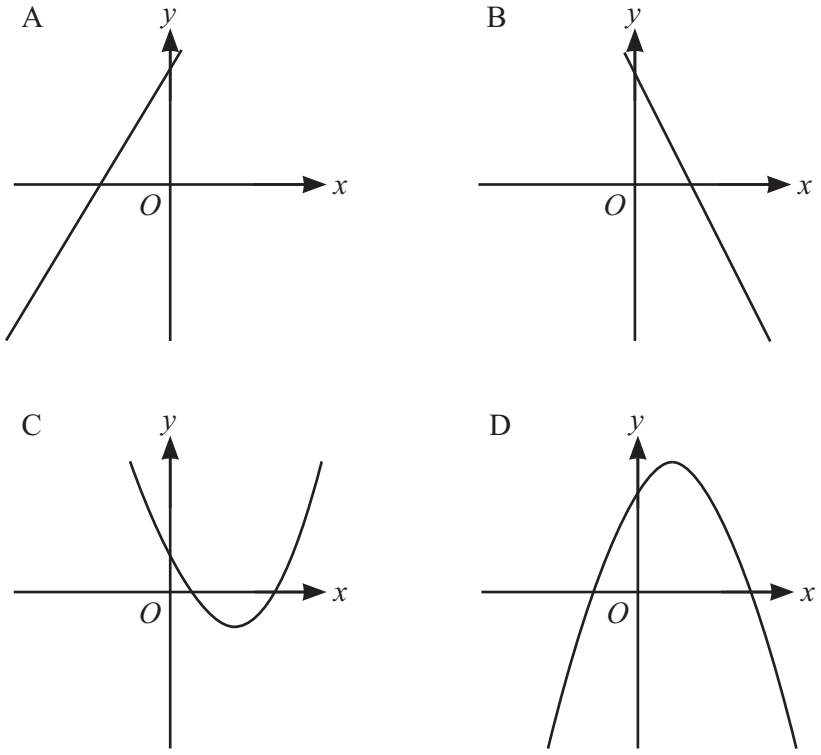
..... [1]

(c) One of the 25 students is chosen at random.

Find the probability that this student eats eggs but does not eat cereal.

..... [1]

17 These are 4 graphs, A, B, C and D.



Complete the following sentences.

(a) The equation $y = 2x + 3$ is represented by graph ..... [1]

(b) The equation $y = -x^2 + 2x + 3$ is represented by graph ..... [1]

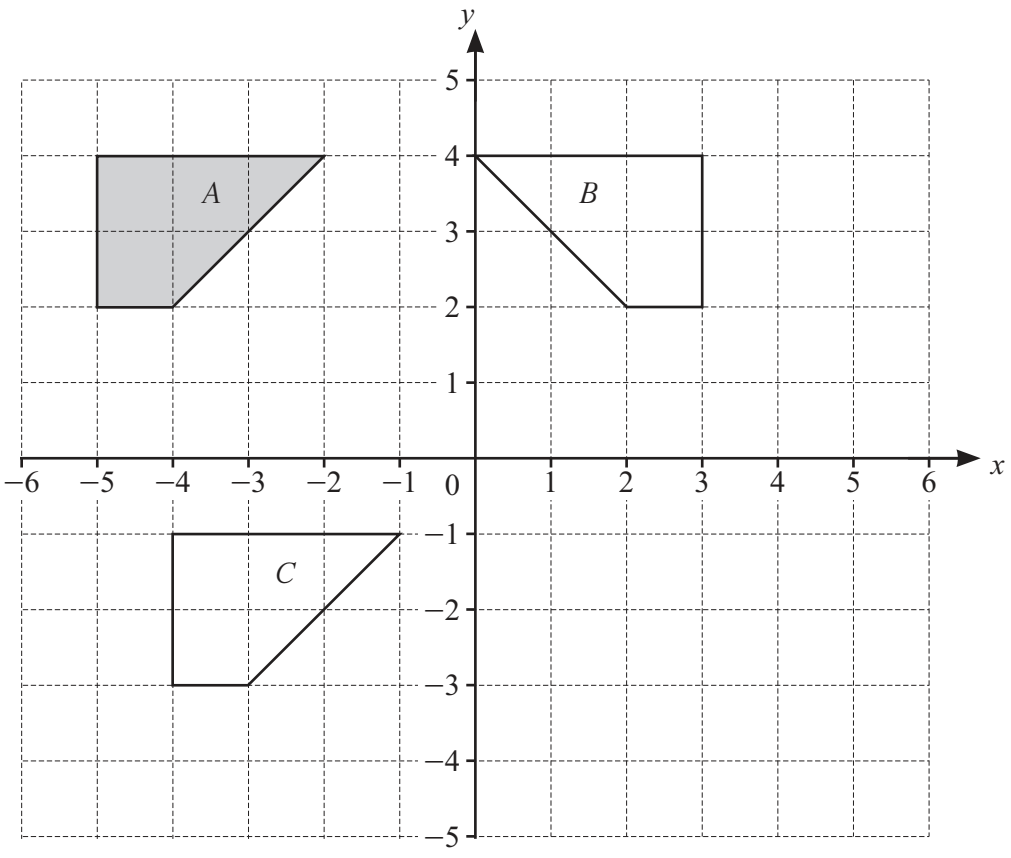
18 Vinema invests \$3000 at a rate of 2% per year simple interest.

Work out the value of Vinema's investment at the end of 4 years.

\$ ..... [3]

Question 19 is printed on the next page.

19



(a) Describe fully the **single** transformation that maps shape *A* onto shape *B*.

.....

..... [2]

(b) Describe fully the **single** transformation that maps shape *A* onto shape *C*.

.....

..... [2]

(c) Rotate shape *A* through 180° about the origin. [2]