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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.

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 .

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

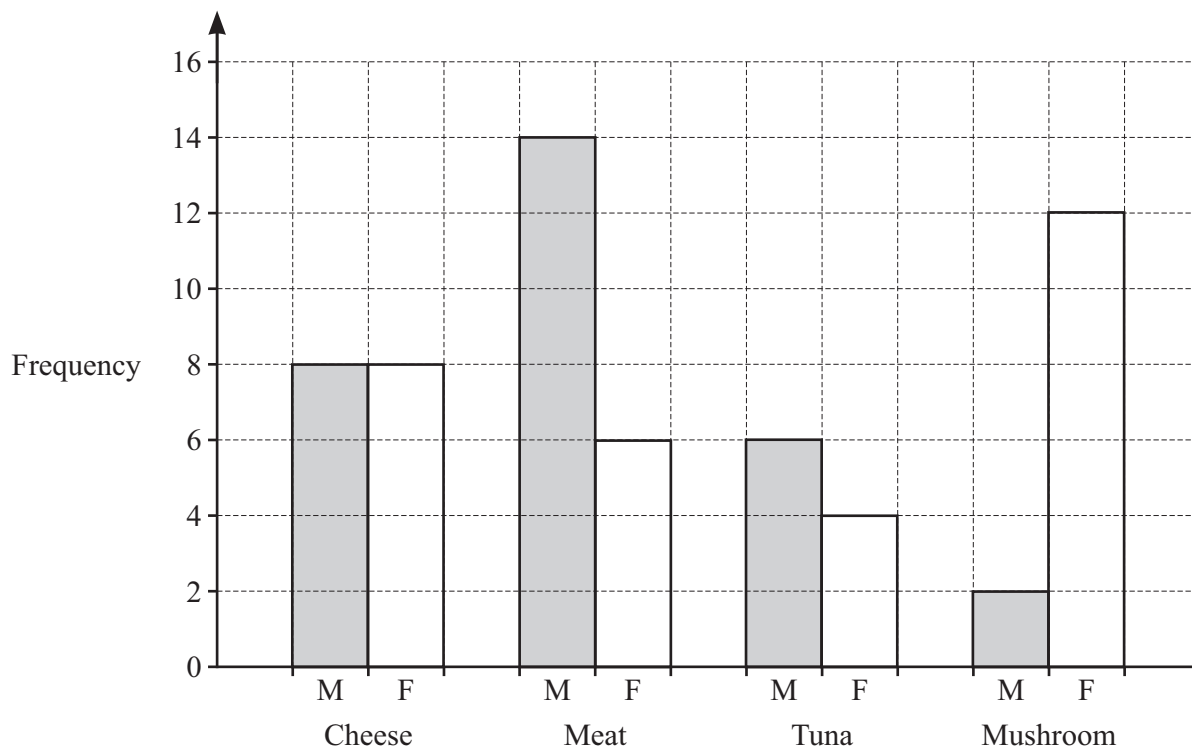
Volume, V , of sphere of radius r .

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



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.

.....
largest

[2]



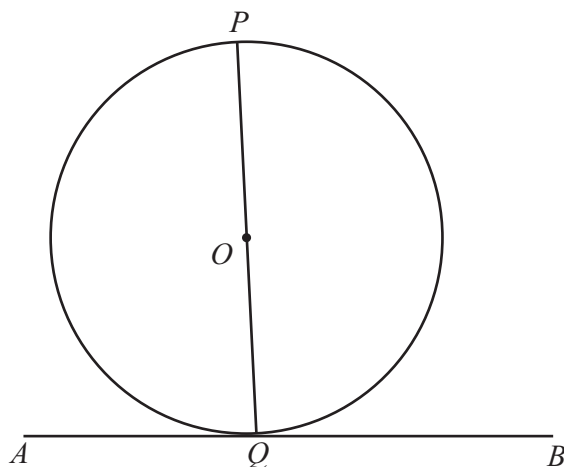
- 2 (a) Write the number 155 000 in words.

..... [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 n th term of the sequence.

..... [2]

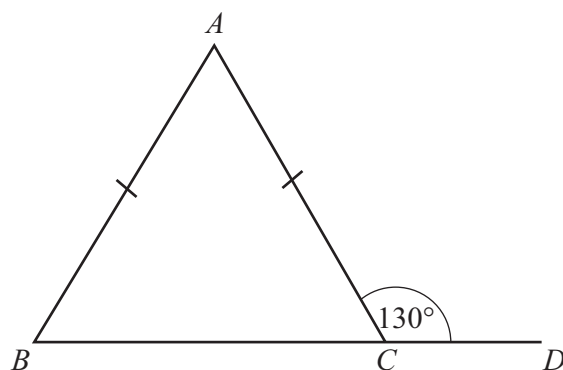
9 By writing each number correct to 1 significant figure, work out an estimate for the value of

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

..... [2]



10

NOT TO
SCALE

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

Find angle BAC .

Angle $BAC = \dots\dots\dots$ [2]

11 Solve.

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

$x = \dots\dots\dots$ [1]

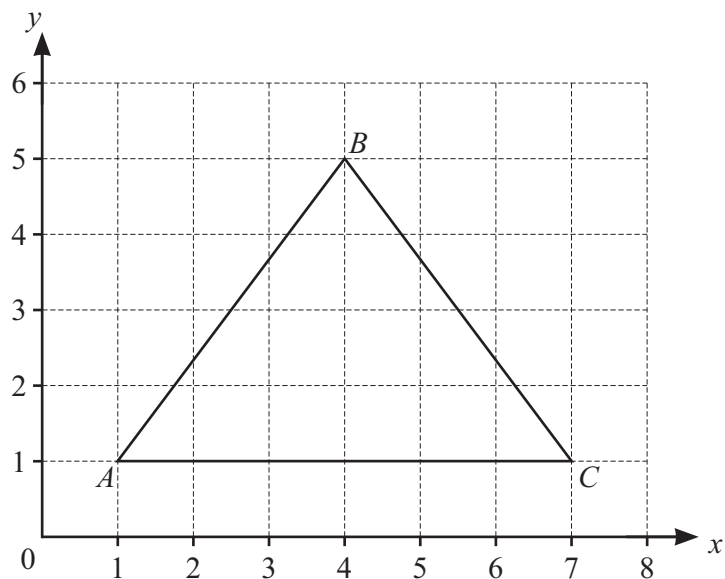
(b) $8x - 3 = -11$

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

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

$x = \dots\dots\dots$ [3]





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 $16\pi \text{ cm}^2$.

Work out the value of r .

$r =$ [2]





16 There are 25 students in a class.

$E = \{\text{students that eat eggs}\}$

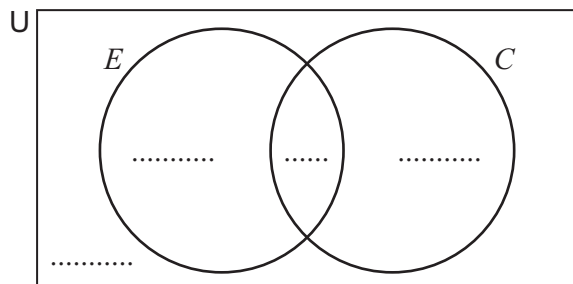
$C = \{\text{students that eat cereal}\}$

$n(E) = 11$

$n(C) = 13$

$n(E \cap C) = 8$

(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]

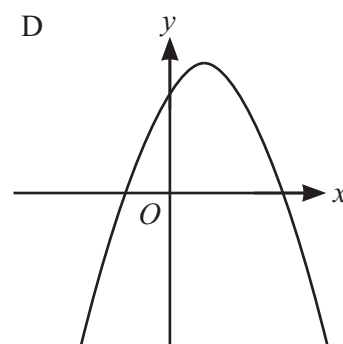
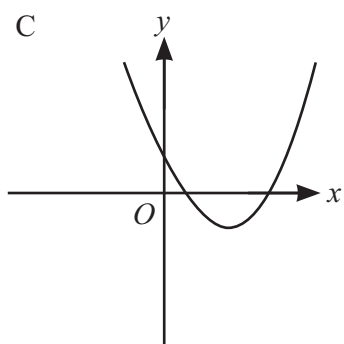
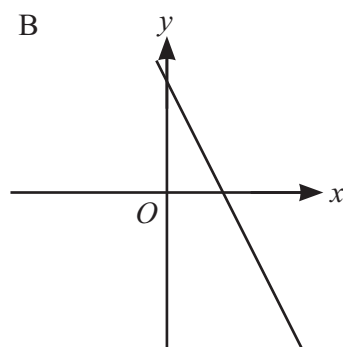
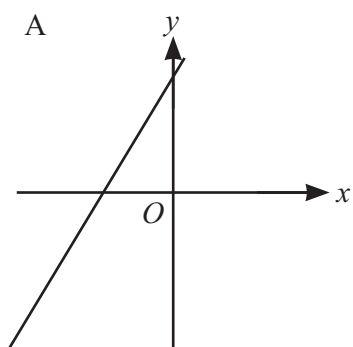
(c) One of the 25 students is chosen at random.

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]

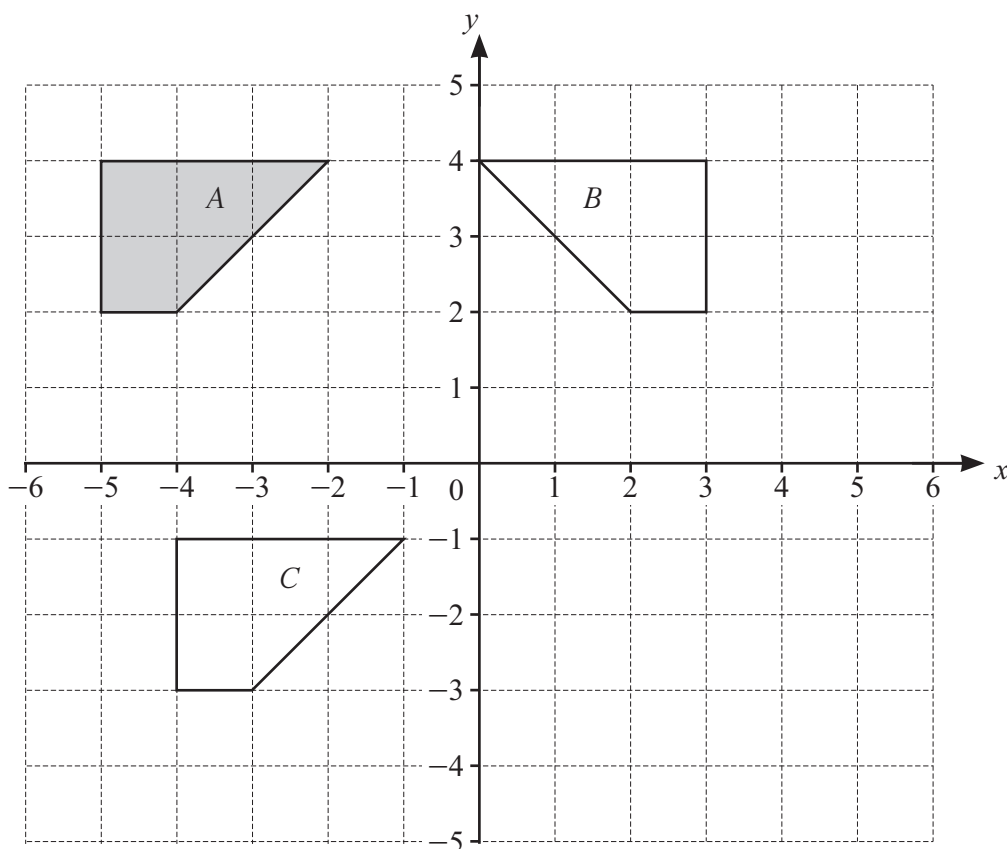
18 Vinema invests \$3000 at a rate of 2% per year simple interest.

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

\$ [3]

Question 19 is printed on the next page.





- (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]

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