Cambridge Assessment International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

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CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/32**

Paper 3 Calculator (Core) **February/March 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.
- You should use a graphic display calculator where appropriate.
- You may use tracing paper.
- You must show all necessary working clearly. You will be given marks for correct methods, including sketches, even if your answer is incorrect.
- 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 π, use either your calculator value or 3.142.

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. Any blank pages are indicated.

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

1 One can of lemonade costs 65 cents.
Larkin buys 7 cans of lemonade.

Work out how much change Larkin gets from \$5.

\$ ..... [2]

2 Work out $\frac{6.23+5.84}{3.61-1.87}$.

..... [1]

3 $x-y+2z=4.1$

Work out the value of x when $y=2.5$ and $z=1.6$.

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

4 Convert 5000 centimetres to metres.

..... m [1]

5 These are the masses, in kg, of each of 11 kangaroos.

66, 72, 90, 85, 91, 78, 86, 67, 72, 82, 80

(a) Find the mean mass.

..... kg [1]

(b) Complete the ordered stem-and-leaf diagram and the key.

6	
7	
8	
9	

Key ..... | ..... represents ..... kg [3]

(c) Find.

(i) the mode ..... kg [1]

(ii) the median

..... kg [1]

(iii) the interquartile range.

..... kg [2]

6 **(a)**

Write down the fraction of the shape that is shaded.

..... [1]

(b) Write the numbers 0.4 $\frac{1}{5}$ 25% in order of size, starting with the smallest.

..... , ... , ... [1]
smallest

7 Suki changes $500 to Yen.
The exchange rate is $1 = 128.42 Yen.

(a) Suki spends 55 000 Yen.

Work out how many Yen she has left.

..... Yen [2]

(b) Suki changes the Yen she has left back to dollars.
The exchange rate is $1 = 124.12 Yen.

Work out how many dollars she receives.

$ ..... [1]

8 **(a)** Simplify $3x + 4x - 5x$.

..... [1]

(b) Expand and simplify $(x-3)(2x+7)$.

..... [2]

9 Samira buys these items.

1.5 kg of apples at \$2.40 per kg.
Some packets of rice at \$4.35 per packet.

Samira pays a total of \$16.65 .

Work out how many packets of rice she buys.

..... [3]

10 Divide 336 in the ratio 6 : 1.

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

11 Ricardo invests $600 at a rate of 1.2% per year compound interest.

Find the value of Ricardo's investment at the end of 4 years.

$ ..... [2]

12 A phone costs $538.
The cost of the phone is increased to $570.28 .

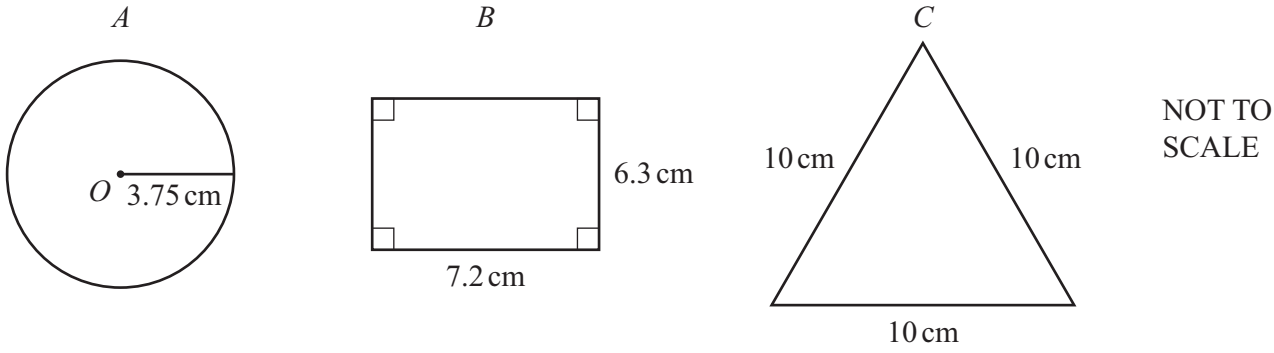
Work out the percentage increase.

..... % [2]

13 Write 2560 in standard form.

..... [1]

14 These are 3 shapes, *A*, *B* and *C*.
O is the centre of shape *A*.



(a) Write down the mathematical name for each shape.

A .....

B .....

C .....

[2]

(b) Use Pythagoras' theorem to show that the perpendicular height of shape *C* is 8.66 cm correct to 2 decimal places.

[3]

(c) Work out the area of each shape.

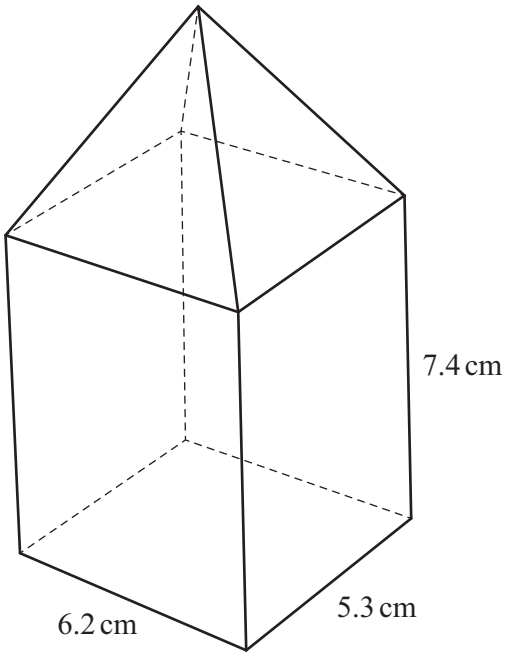
A ..... cm^2

B ..... cm^2

C ..... cm^2

[4]

15 The diagram shows a solid trophy.



NOT TO SCALE

The trophy is made by joining a pyramid to a cuboid.

The cuboid has dimensions 6.2 cm by 5.3 cm by 7.4 cm.
The height of the pyramid is H cm.
The total height of the trophy is 10.2 cm.

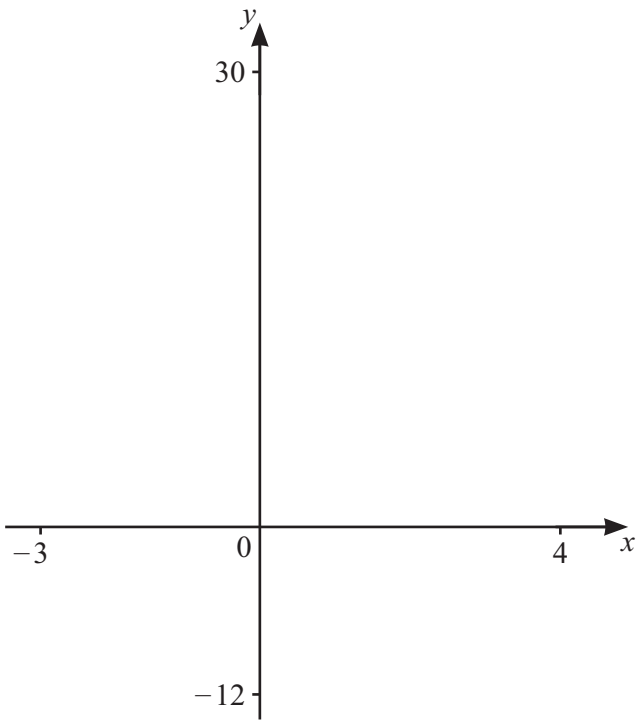
(a) Show that $H = 2.8$.

[1]

(b) Work out the total volume of the trophy.

..... cm^3 [4]

16



(a) On the diagram, sketch the graph of $y = 2x^2 + x - 6$ for values of x between -3 and 4. [2]

(b) **(i)** On the diagram, sketch the graph of $y = 3 + 2x - x^2$ for values of x between -3 and 4. [2]

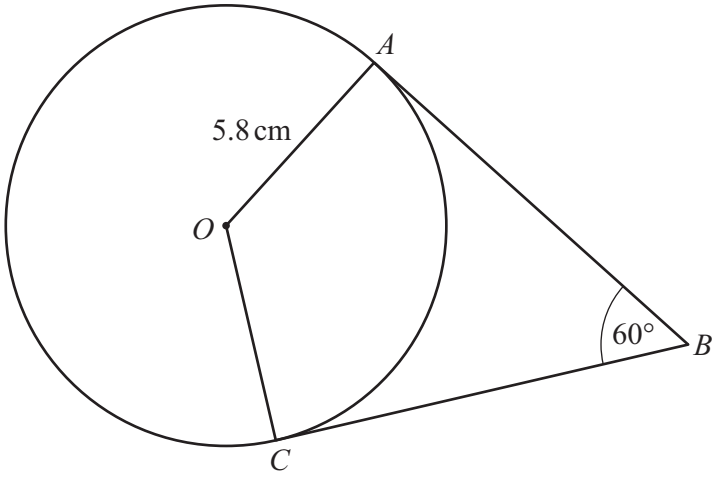
(ii) Find the coordinates of the maximum of $y = 3 + 2x - x^2$.

(..... , ...) [1]

(c) Find the x-coordinate of each point of intersection of $y = 2x^2 + x - 6$ and $y = 3 + 2x - x^2$.

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

17



NOT TO SCALE

The diagram shows a circle with centre O and radius 5.8 cm.
BA and BC are tangents to the circle.
Angle $ABC = 60°$.

(a) Show that angle $AOC = 120°$.

[2]

(b) Find the length of the arc AC.

.....cm [2]

(c) Find the length of AB.

.....cm [3]

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