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CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/31

Paper 3 Calculator (Core)

May/June 2026

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. Do **not** use correction fluid or tape.
- 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.

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 Write $\frac{3}{5}$

(a) as a decimal

..... [1]

(b) as a percentage.

..... % [1]

2 (a) Work out $\frac{3.82 \times 5.23}{1.63 - 1.17}$.

Give your answer correct to the nearest 10.

..... [2]

(b) Work out $\frac{\sqrt{16.84} - 2.39}{5.26}$.

Give your answer correct to 2 decimal places.

..... [2]



3 (a) These are the first 5 terms of a sequence.

7 13 19 25 31

(i) Write down the next term of this sequence.

..... [1]

(ii) Write down the rule for finding the next term of this sequence.

..... [1]

(iii) Find the n th term of this sequence.

..... [2]

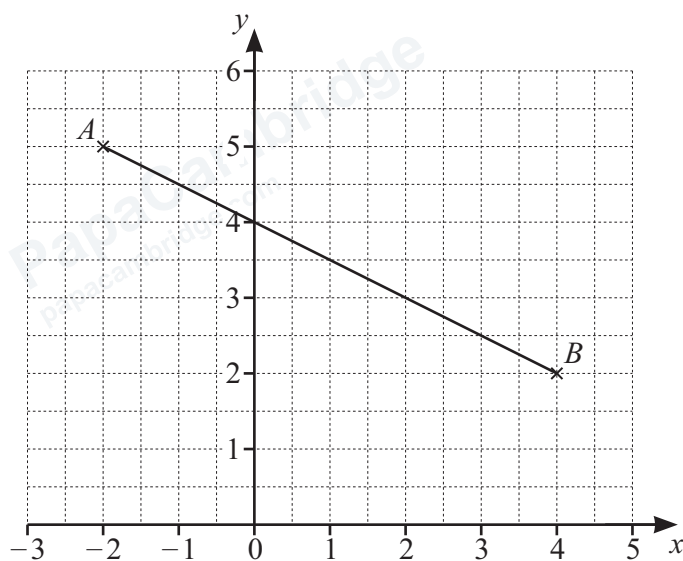
(b) The n th term of another sequence is $2n^2 - 1$.

Work out the first 3 terms of this sequence.

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



- 4 The line AB is drawn on a square grid.



- (a) Write down the coordinates of point B .

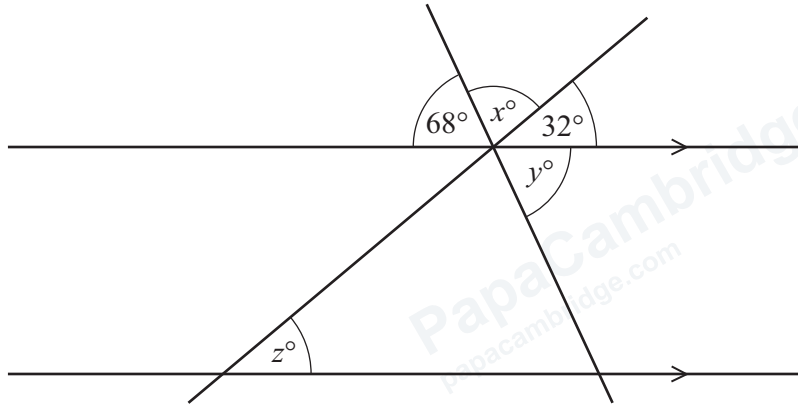
(..... , ...) [1]

- (b) Find the coordinates of the midpoint of AB .

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

- (c) Find the equation of the line AB .
Give your answer in the form $y = mx + c$.

$y =$ [2]



NOT TO SCALE

The diagram shows 2 straight lines crossing 2 parallel lines.

Find the values of x , y and z .

$x =$

$y =$

$z =$ [3]

- 6 Mateuse buys 5 chocolate bars.
These chocolate bars are all the same price.
Mateuse pays with \$10 and receives \$2.20 change.

Work out the cost of each of these chocolate bars.

\$ [2]





7 The age of each of 15 doctors is shown in the stem-and-leaf diagram.

2	7	8	8		
3	4	5	6	8	9
4	2	4	7	8	
5	3	7	9		

key 2 | 7 = 27

(a) Write down the most common age.

..... [1]

(b) Find

(i) the median

..... [1]

(ii) the lower quartile.

..... [1]

(c) Calculate the mean.

..... [2]

8 (a) Find 8% of \$640.

\$..... [1]

(b) Work out 35 as a percentage of 250.

..... % [1]

- 9 Ryan is paid \$12 each day to pick asparagus. The asparagus Ryan picks is weighed. Ryan is also paid \$1.50 for each kilogram of asparagus he picks.

- (a) One day Ryan picks 23 kg of asparagus.

Work out how much he is paid in total that day.

\$ [2]

- (b) Ryan works for D days and picks a total of A kg of asparagus. Ryan is paid a total of $\$P$.

Write down a formula for P in terms of D and A .

$P =$ [2]

- (c) Ryan works for 5 days and is paid a total of \$189.

Work out how many kilograms of asparagus Ryan picks in these 5 days.

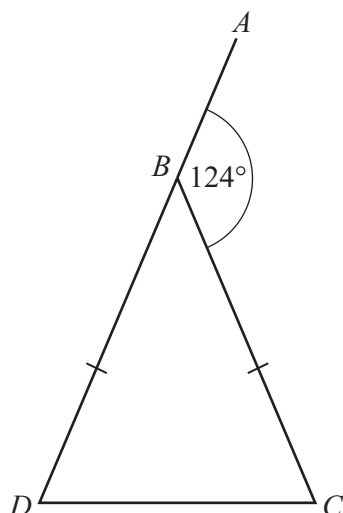
..... kg [2]

- 10 A sphere has radius 7.3 cm.

Work out the surface area of this sphere.

..... cm^2 [2]

11



NOT TO SCALE

ABD is a straight line.
 BCD is an isosceles triangle.
 Angle $ABC = 124^\circ$.

Find the size of angle BCD .

angle $BCD = \dots\dots\dots$ [2]

- 12 Sundeep throws a biased 6-sided die.
 The table shows the probability of the die landing on each number.

number	1	2	3	4	5	6
probability	$\frac{11}{72}$	$\frac{13}{72}$	$\frac{8}{72}$	$\frac{10}{72}$	$\frac{14}{72}$	$\frac{x}{72}$

- (a) Find the value of x .

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

- (b) Sundeep throws this die 180 times.

Find the expected number of times this die lands on 4.

$\dots\dots\dots$ [1]

- 13 Lavinia leaves home at 18 25 to go to the cinema.
The cinema is 750 metres from Lavinia's home.
Lavinia walks at an average speed of 5 km/h.

Calculate the time Lavinia arrives at the cinema.

..... [3]

- 14 (a) $63000 = 6.3 \times 10^x$.

Write down the value of x .

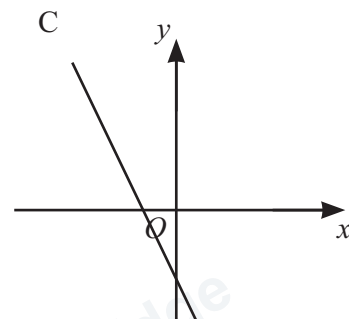
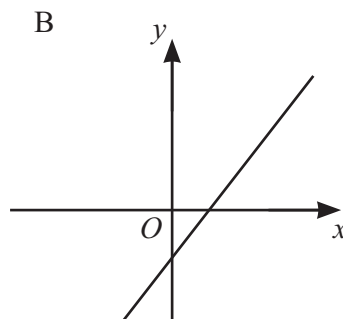
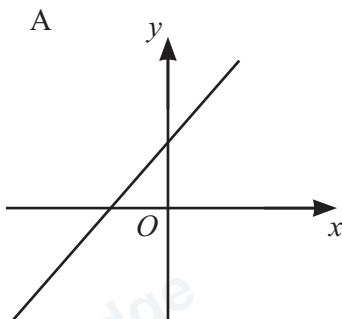
$x =$ [1]

- (b) Work out $\frac{(2.8 \times 10^4)}{(5.6 \times 10^{-2})}$.

Give your answer in standard form.

..... [2]

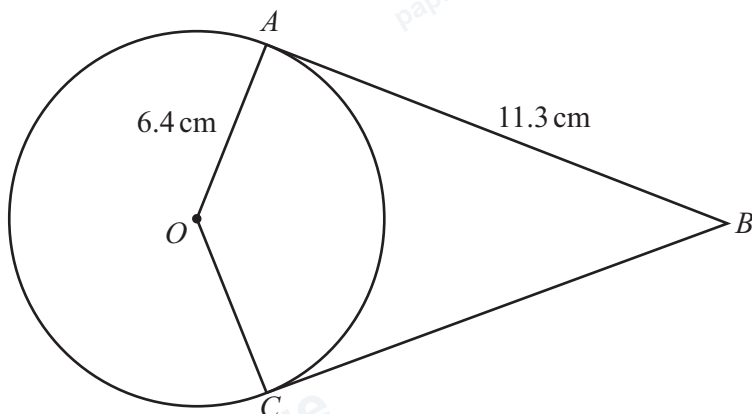
- 15 Diagrams A, B and C each show a straight-line graph.



Write down the letter of the diagram which shows the line with equation $y = 2x - 3$.

..... [1]





NOT TO SCALE

AB and CB are tangents to the circle with centre O and radius 6.4 cm.
 AB is 11.3 cm.

(a) Write down the length of CB .

..... cm [1]

(b) Give a geometrical reason why angle $OAB = 90^\circ$.

..... [1]

(c) Work out the size of angle ABC .

angle $ABC =$ [3]

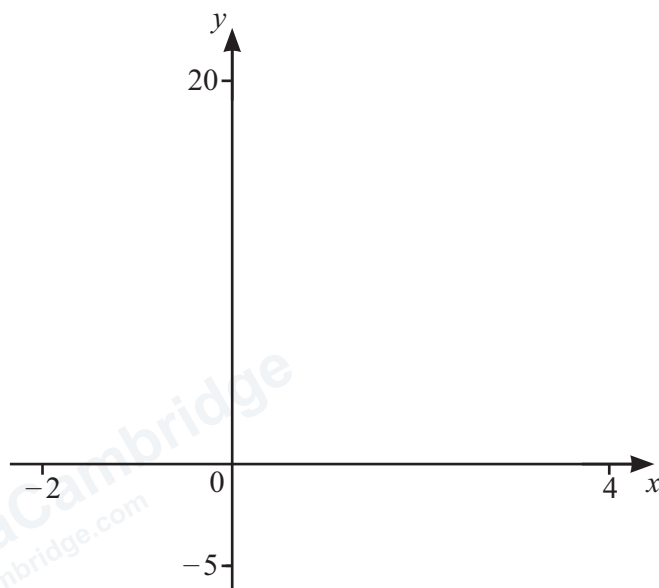
(d) Work out the length of OB .

$OB =$ cm [2]

(e) Work out the area of $OABC$.

..... cm^2 [1]

Question 17 is on the back page.



(a) On the diagram, sketch the graph of $y = 2x^2 - 5x + 1$ for values of x between -2 and 4 . [2]

(b) Find the x -coordinates of the points where the graph crosses the x -axis.

..... and [2]

(c) Find the x -coordinate of the local minimum.

$x =$ [1]

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