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CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/32

Paper 3 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.
- 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 Jamal buys 5 packets of lentils.
He pays with \$10.
He receives \$2.75 change.

Work out the cost of one packet of lentils.

\$ [2]

- 2 Work out $\frac{7.3}{1.2 + 3.5}$.
Give your answer correct to 4 decimal places.

..... [2]

- 3 A factory makes 578 880 cookies every 24 hours.
(a) Show that 402 cookies are made every minute.

[2]

- (b) The cookies are sold in packets of 6.

Work out how many packets of 6 are made every minute.

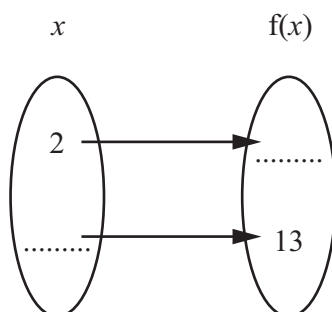
..... [1]





4 $f(x) = 5x - 7$

Complete the mapping diagram.



[2]

5 These are 6 number cards.



Use 4 of these cards to complete the equivalent fractions.

$$\frac{\boxed{}}{\boxed{}} = \frac{\boxed{}}{\boxed{12}} = \frac{\boxed{12}}{\boxed{}}$$

[2]

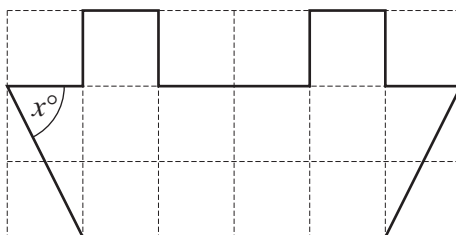
6 Solve.

$$7x - 13.2 = 2x + 0.8$$

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



7 A shape is drawn on a 1 cm^2 grid.



(a) Work out the area of the shape.

..... cm^2 [1]

(b) Use trigonometry to find the value of x .

$x =$ [2]

8 $A = \frac{1}{2}(x + 2y)$

(a) Find the value of A when $x = 7.23$ and $y = 2.16$.

$A =$ [2]

(b) Find the value of x when $A = 9.47$ and $y = 1.89$.

$x =$ [2]



9 Pirupak walks 220 metres in 2.25 minutes.

(a) Show that 2.25 minutes = 135 seconds.

[1]

(b) Work out Pirupak's speed in metres per second.

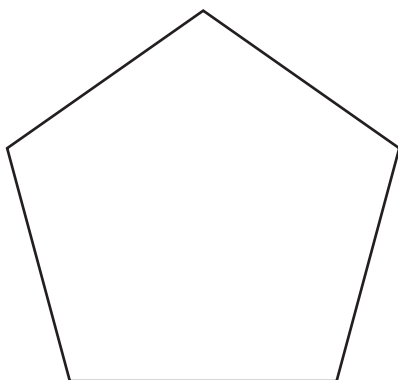
..... m/s [1]

10 The cost of a laptop is \$3200.
In a sale, the cost of this laptop is reduced to \$2816.

Work out the percentage reduction.

..... % [2]





NOT TO
SCALE

The diagram shows a regular 5-sided polygon.

(a) Write down the mathematical name for this polygon.

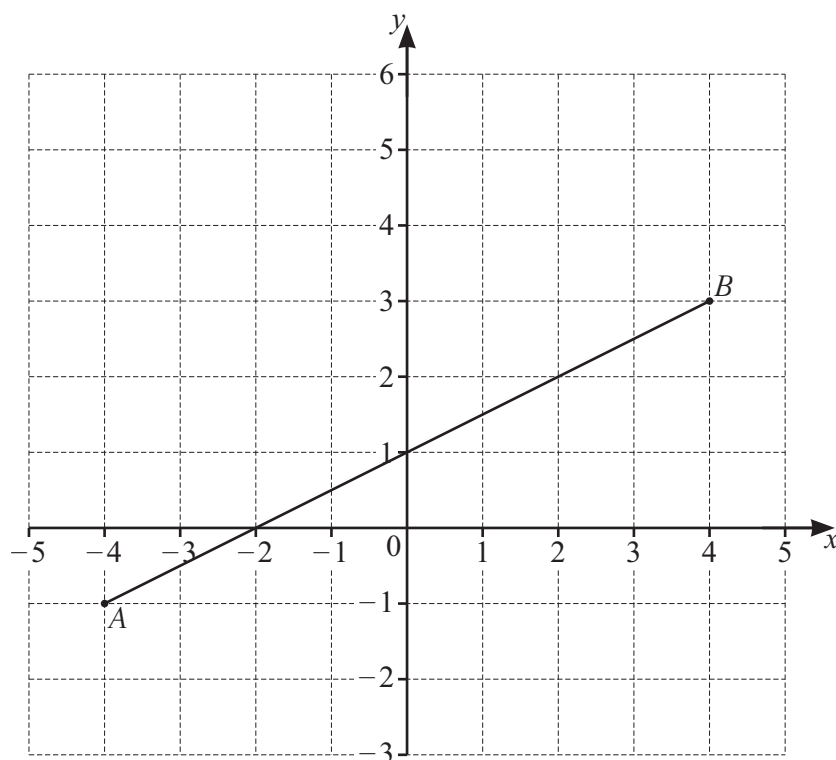
..... [1]

(b) Work out the size of one interior angle of this polygon.

..... [2]



- 12 The diagram shows a straight line joining point $A(-4, -1)$ and point $B(4, 3)$.



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

(..... ,) [1]

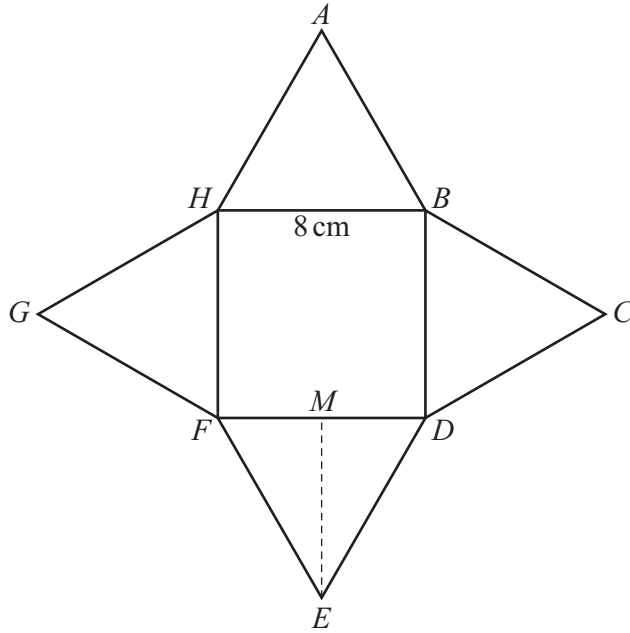
- (b) Work out the gradient of AB .

..... [2]

- (c) Find the equation of AB .

..... [2]





NOT TO
SCALE

The diagram shows a shape made from a square of side 8 cm and four equilateral triangles.

- (a) Write down the length of DE .

$DE = \dots\dots\dots$ cm [1]

- (b) Write down the size of angle FDE .

Angle $FDE = \dots\dots\dots$ [1]

- (c) M is the midpoint of FD .

Show that $EM = 6.93$ correct to 3 significant figures.

[3]

- (d) Work out the total area of the shape.

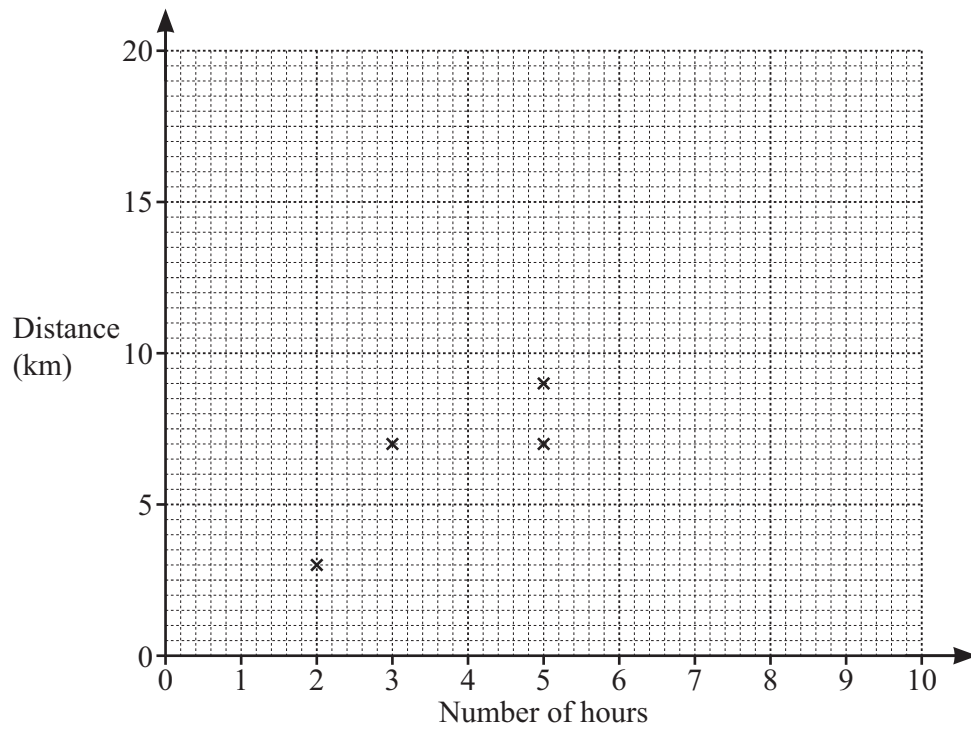
$\dots\dots\dots$ cm² [3]



- 14 8 people train for a charity run.
The number of hours that they train and the distance they run is shown in the table.

Number of hours	2	3	5	5	6	7	8	10
Distance (km)	3	7	7	9	12	13	15	18

- (a) Complete the scatter diagram.
The first four points have been plotted for you.



[2]

- (b) Write down the type of correlation shown in the scatter diagram.

..... [1]

- (c) Work out

- (i) the mean number of hours

..... h [1]

- (ii) the mean distance.

..... km [1]

- (d) On the diagram, draw a line of best fit.

[2]



- 15 Shaila invests \$2000 at a rate of 1.3% per year compound interest.

Calculate the amount of interest she receives at the end of 3 years.

\$ [3]

- 16 Rohan goes for a holiday to Europe.

He changes \$2000 into euros (€) at an exchange rate of \$1 = €0.9759 .

- (a) Show that Rohan receives €1951.80 .

[1]

- (b) In Europe, Rohan spends €1500.

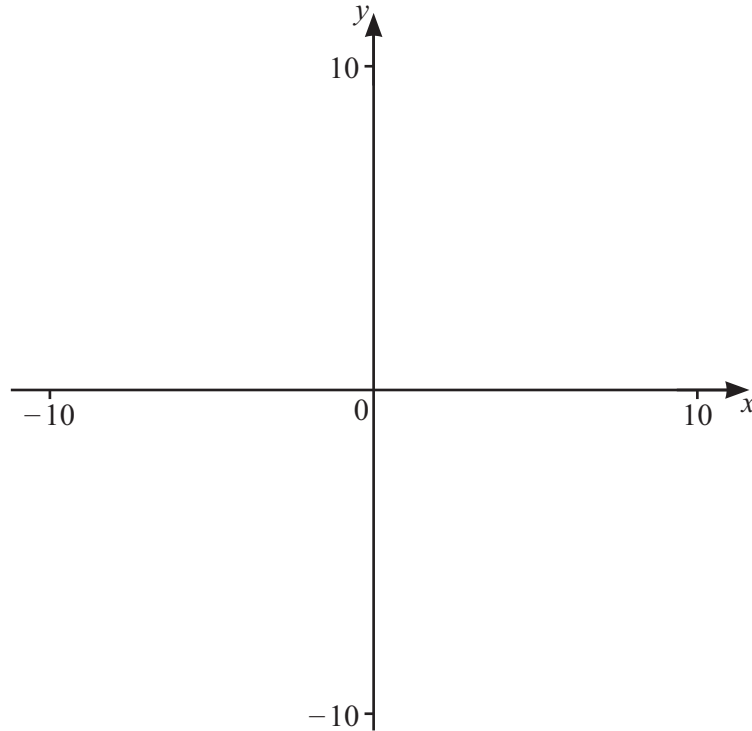
He changes the remaining euros back to dollars (\$) at the same exchange rate.

Calculate the amount Rohan receives.

\$ [2]

Question 17 is printed on the next page.





- (a) On the diagram, sketch the graph of $y = \frac{3x+6}{x-2}$ for values of x between -10 and 10 . [3]
- (b) Find the coordinates of the point where the graph crosses the x -axis.
(..... ,) [1]
- (c) On the diagram, sketch the graph of $y = x$ for values of x between -10 and 10 . [1]
- (d) Find the coordinates of the points of intersection of $y = \frac{3x+6}{x-2}$ and $y = x$.
(..... ,) and (..... ,) [2]

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