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CAMBRIDGE INTERNATIONAL MATHEMATICS**0607/32**

Paper 3 Calculator (Core)

October/November 2025**1 hour 15 minutes**

You must answer on the question paper.

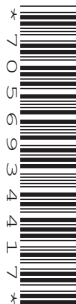
You will need: Geometrical instruments

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 (a) Work out how many days there are in 6 weeks.

..... days [1]

- (b) Write 14 25 as a 12-hour clock time.

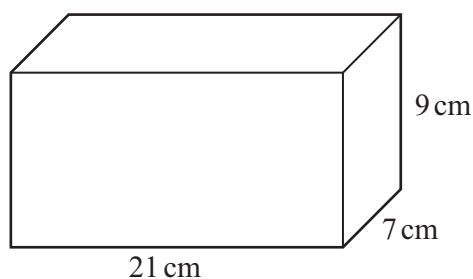
..... [1]

- (c) A TV programme starts at 15 25 and finishes at 16 09.

Work out how many minutes the programme lasts.

..... minutes [1]

2



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This solid cuboid has dimensions 21 cm, 7 cm and 9 cm.

- (a) Write down the number of faces, edges and vertices of the cuboid.

Faces

Edges

Vertices

[2]

- (b) Work out the volume of the cuboid.
Give the units of your answer.

..... [2]



- 3 (a) Write down an even number between 1 and 10.

..... [1]

- (b) Write down a square number between 1 and 10.

..... [1]

- (c) Write down all the factors of 20.

..... [2]

- 4 Find the value of $\sqrt{8.2 \times 7.6}$.
Give your answer correct to 3 decimal places.

..... [2]

- 5 The exchange rate between dollars (\$) and pounds (£) is $\$1 = \pounds 0.82$.

- (a) Divya changes \$140 into pounds.

Work out how much money, in pounds, she receives.

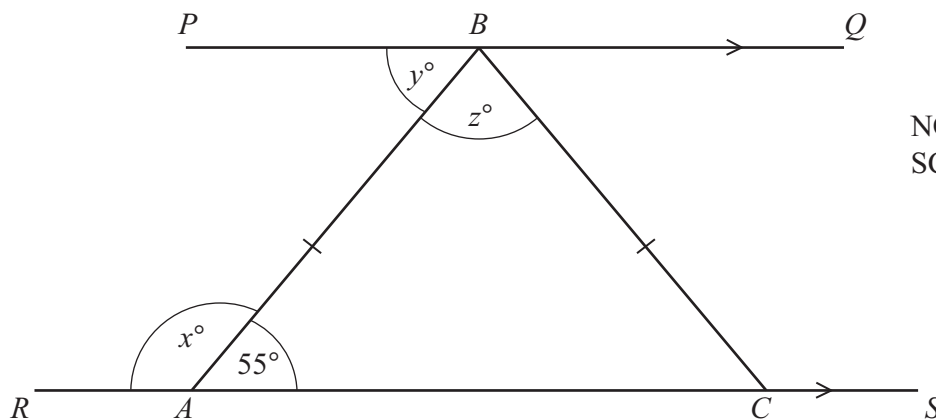
£ [1]

- (b) The price of a watch is £120.

Work out the price of the watch in dollars.

\$ [1]





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ABC is an isosceles triangle.
 PBQ and $RACS$ are parallel lines.

(a) Find the value of x .

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

(b) Find the value of y .

$y = \dots\dots\dots$ [1]

(c) Find the value of z .

$z = \dots\dots\dots$ [2]

7 A circle has circumference 15 cm.

Find the radius of the circle.

$\dots\dots\dots$ cm [2]



8 Toby makes food for parties.

(a) Toby uses this formula to work out how many sandwiches to make for a party.

$$N = 3P + 18$$

N is the number of sandwiches he makes.

P is the number of people at the party.

(i) 25 people are at a party.

Work out the number of sandwiches Toby makes.

..... [2]

(ii) Toby makes 177 sandwiches for another party.

Work out the number of people at this party.

..... [2]

(b) Toby makes 4 cakes for each person at a party, plus 12 extra cakes.

Find a formula for the number of cakes, C , Toby makes for a party of P people.

..... [2]



- 9 A breakfast cereal is made using only oats and raisins.
The mass of oats and the mass of raisins in the cereal are in this ratio.

$$\text{oats} : \text{raisins} = 30 : 12$$

- (a) Write the ratio 30 : 12 in its simplest form.

..... : [1]

- (b) A box contains 560 g of this breakfast cereal.

Work out the mass of oats and the mass of raisins in the box.

Oats g

Raisins g [2]

- 10 Simplify.

$$5x^4y \times 3x^3y$$

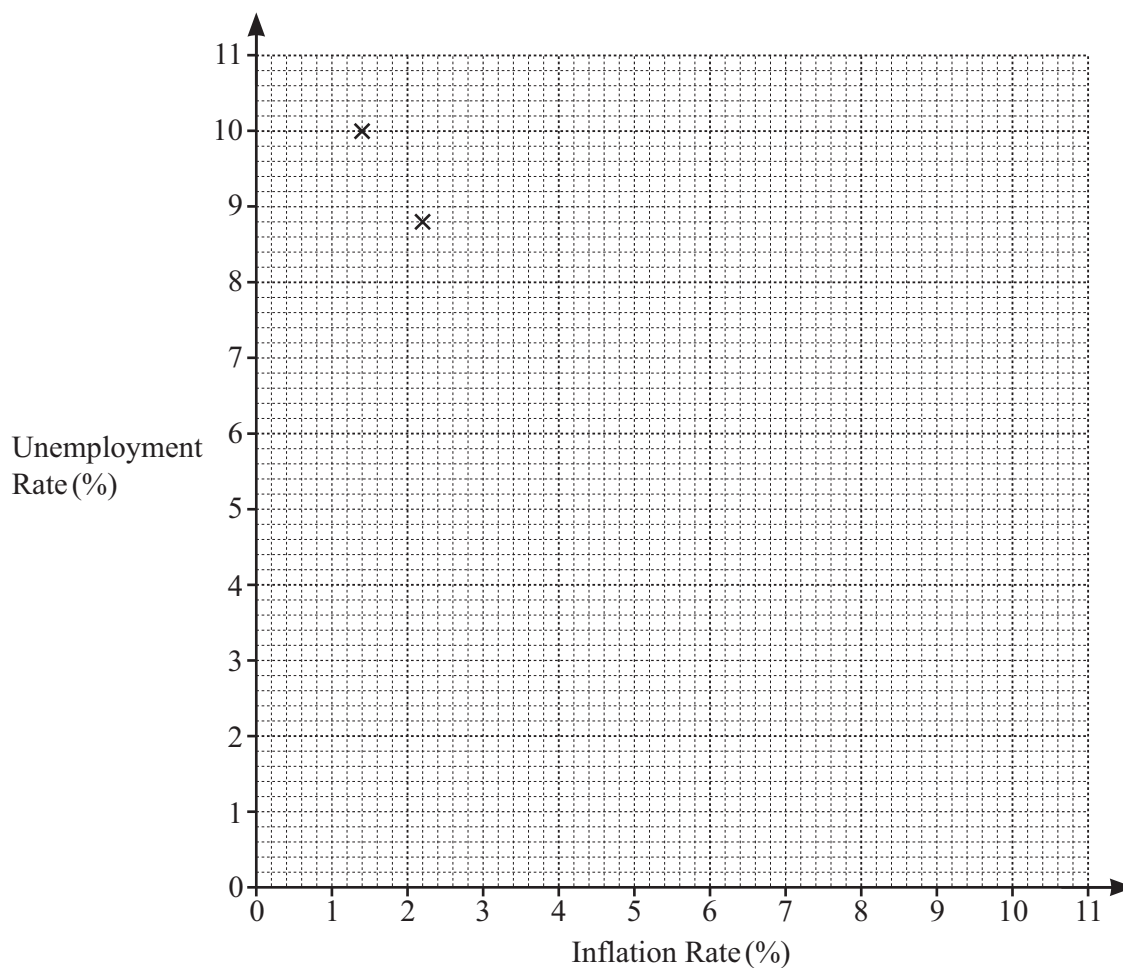
..... [2]



11 The table shows the Inflation Rate and the Unemployment Rate for 6 countries.

Inflation Rate (%)	1.4	2.2	2.4	4.6	5.0	6.0
Unemployment Rate (%)	10.0	8.8	8.4	6.2	5.0	3.6

- (a) Complete the scatter diagram.
The first 2 points have been plotted for you.



[2]

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

..... [1]



- (c) The mean Inflation Rate is 3.6%.
The mean Unemployment Rate is 7.0%.

On the scatter diagram, draw a line of best fit.

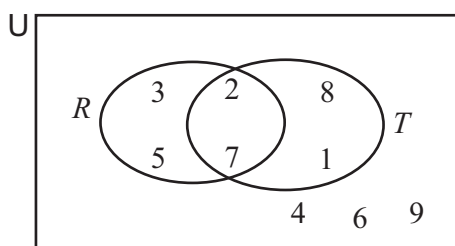
[2]

- (d) Another country has an Inflation Rate of 3.0% .

Use your line of best fit to find an estimate of the Unemployment Rate of this country.

..... % [1]

12 (a)

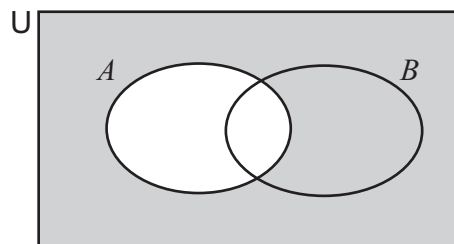
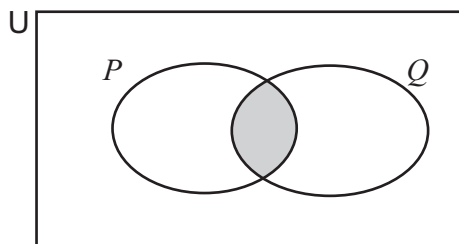


$$U = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$$

Write down the elements of set R .

..... [1]

- (b) Use set notation to describe each shaded region.

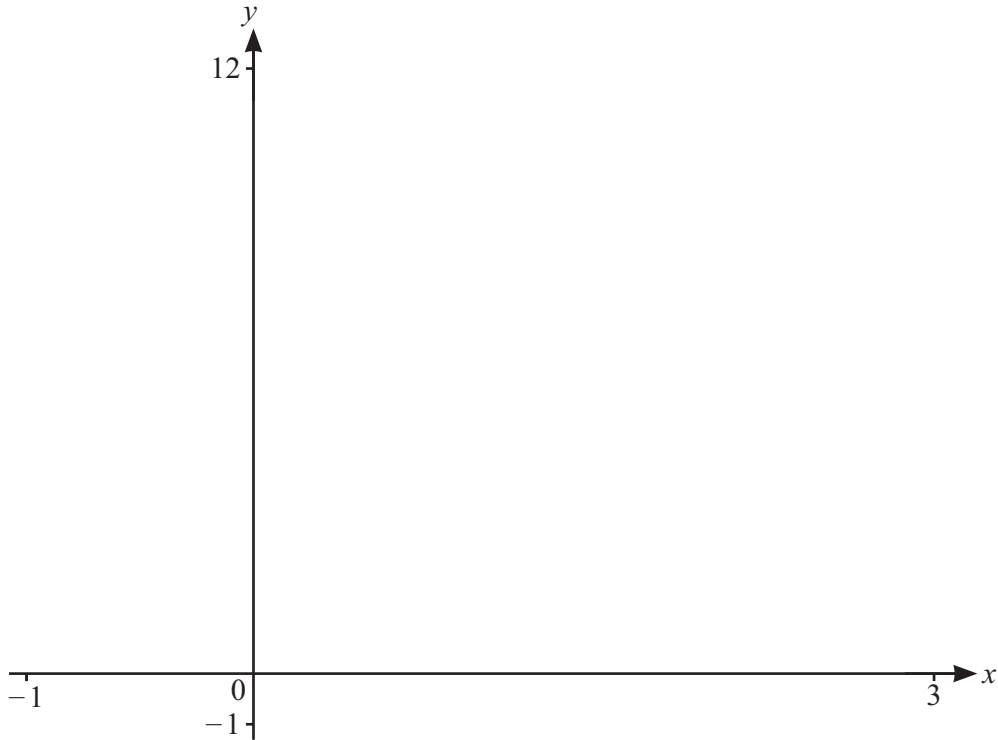


.....

.....

[2]





(a) (i) On the diagram, sketch the graph of $y = 2x^2 - 3x + 1$ for values of x between -1 and 3 . [2]

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

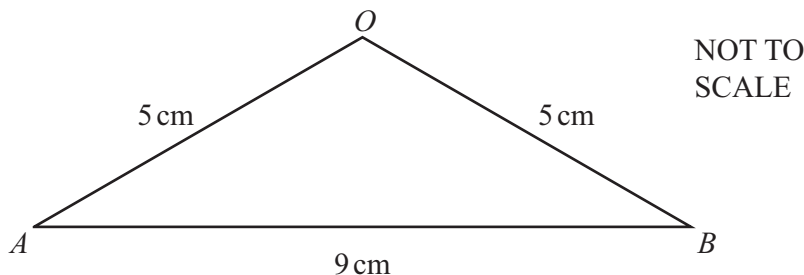
$x = \dots\dots\dots$ [1]

(b) On the diagram, sketch the graph of $y = x + 1$ for values of x between -1 and 3 . [2]

(c) Find the coordinates of each point of intersection of $y = 2x^2 - 3x + 1$ and $y = x + 1$.

($\dots\dots\dots$, $\dots\dots\dots$) and ($\dots\dots\dots$, $\dots\dots\dots$) [2]





The diagram shows an isosceles triangle.

Use trigonometry to calculate the size of angle AOB .

..... [4]

- 15 Lara invests some money in an account that pays compound interest at a rate of $R\%$ per year. The bank uses this formula to work out the value of her investment.

$$A = 5000 \times \left[1 + \frac{8}{100} \right]^T$$

A is the value of the investment at the end of T years.

- (a) Write down the amount of money Lara invests.

\$ [1]

- (b) Write down the value of R .

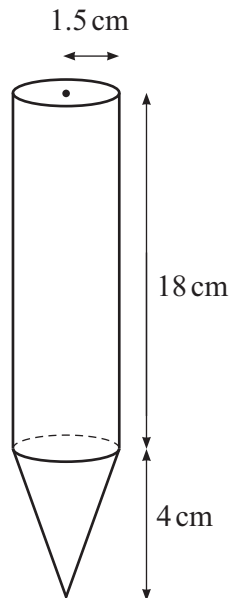
$R =$ [1]

- (c) Calculate the amount of **interest** Lara receives at the end of 10 years.

\$ [2]

Question 16 is printed on the next page.





NOT TO
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A firework is made from a cylinder and a cone.

The cylinder has height 18 cm and radius 1.5 cm.

The cone has height 4 cm and radius 1.5 cm.

Show that the total volume of the firework is 137 cm^3 , correct to 3 significant figures.

[4]

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