



CANDIDATE
NAME

CENTRE
NUMBER

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CANDIDATE
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CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/41

Paper 4 Calculator (Extended)

May/June 2026

1 hour 30 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 75.
- The number of marks for each question or part question is shown in brackets [].

This document has **16** pages. Any blank pages are indicated.

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 .

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

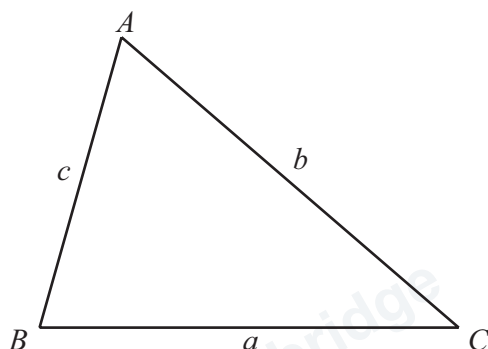
Volume, V , of sphere of radius r .

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

For the equation $ax^2 + bx + c = 0$, where $a \neq 0$,

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

For the triangle shown,



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$a^2 = b^2 + c^2 - 2bc \cos A$$

$$\text{Area} = \frac{1}{2}ab \sin C$$



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1 Calculate $\frac{17}{32} \div \frac{85}{128}$.

..... [1]

2 Share \$165 in the ratio 3 : 8.

\$....., \$..... [2]

3 Change 4.7 m^2 into cm^2 .

..... cm^2 [1]

4 The table shows the times taken by 800 people to complete a task.

time (t seconds)	$0 < t \leq 25$	$25 < t \leq 35$	$35 < t \leq 40$	$40 < t \leq 50$	$50 < t \leq 70$
frequency	15	90	280	275	140

(a) Write down the modal class.

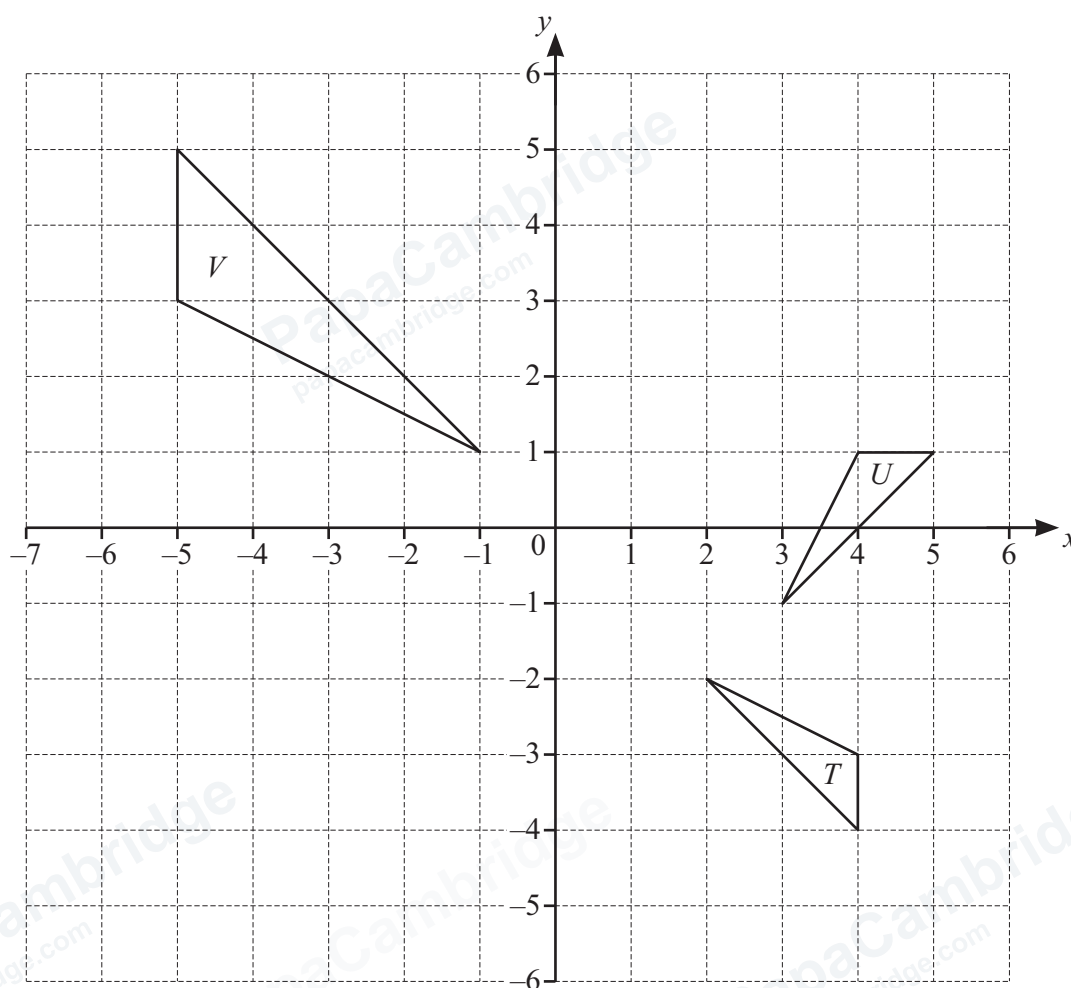
..... $< t \leq$ [1]

(b) Calculate an estimate of the mean time.

.....s [2]



- 5 The diagram shows triangle T , triangle U and triangle V on a grid.



- (a) Reflect triangle T in the line $x = -1$.

[2]

- (b) Describe fully the **single** transformation that maps triangle V onto triangle T .

.....
 [3]

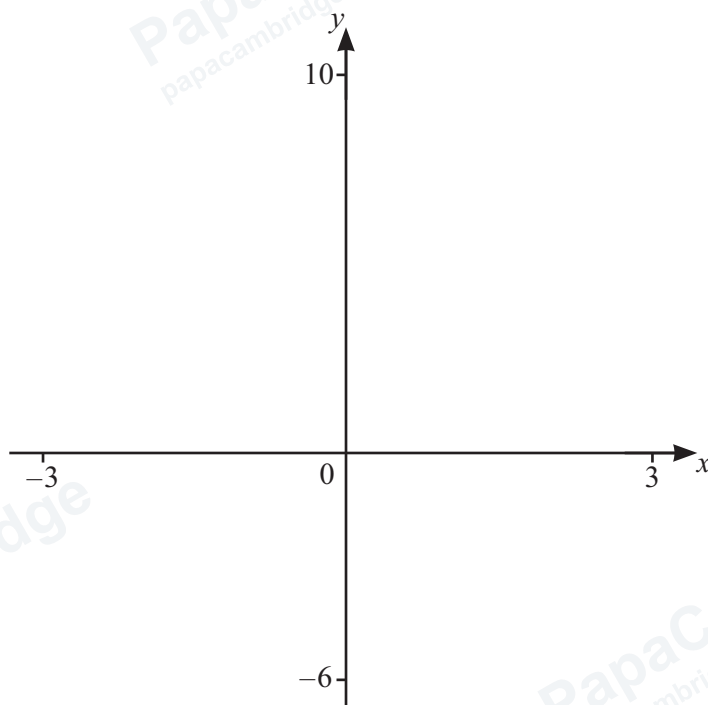
- (c) Describe fully the **single** transformation that maps triangle T onto triangle U .

.....
 [3]



6

5



$f(x) = 0.5x^3 - 2x + 2$

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

(b) Solve $f(x) = -1$.

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

7 (a) $f(x) = 3x - 2$

(i) Find $f(-1)$.

..... [1]

(ii) Solve $ff(x) = 46$.

$x =$ [3]

(b) $g(x) = x^2 + 1$ for $x \geq 0$

Find $g^{-1}(x)$.

$g^{-1}(x) =$ [2]

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

17 17 15 11 5

Find the next two terms.

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

- (b) The n th term of a different sequence is $13n^2 - 5$.

Find the value of n when the n th term is 16 843.

$n =$ [2]

- (c) These are the first 5 terms of another sequence.

1 15 53 127 249

Find the n th term of this sequence.

..... [2]

- 9 (a) Jon invests \$400 at a rate of 3.5% per year simple interest.

Calculate the value of Jon's investment at the end of 5 years.

\$ [3]

- (b) Ami invests \$600 at a rate of 3% per year compound interest.

- (i) Calculate the value of Ami's investment at the end of 5 years.

\$ [2]

- (ii) Find the number of complete years it takes for the value of Ami's investment of \$600 to be first more than \$850.

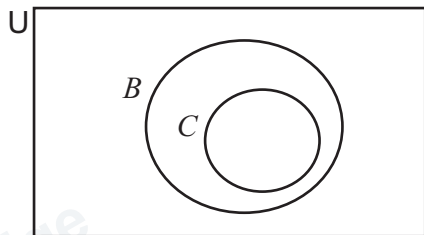
..... [4]

- 10 Make t the subject of the formula $P = 9r^2 - 16t^2$.

$t =$ [3]



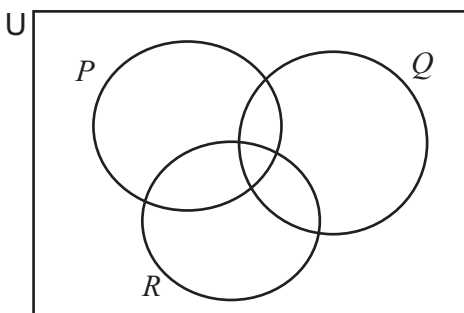
11 (a) This is a Venn diagram.



Complete the statement using set notation.

$C \dots\dots\dots B$ [1]

(b) On the Venn diagram, shade $P' \cap (Q \cup R)$.

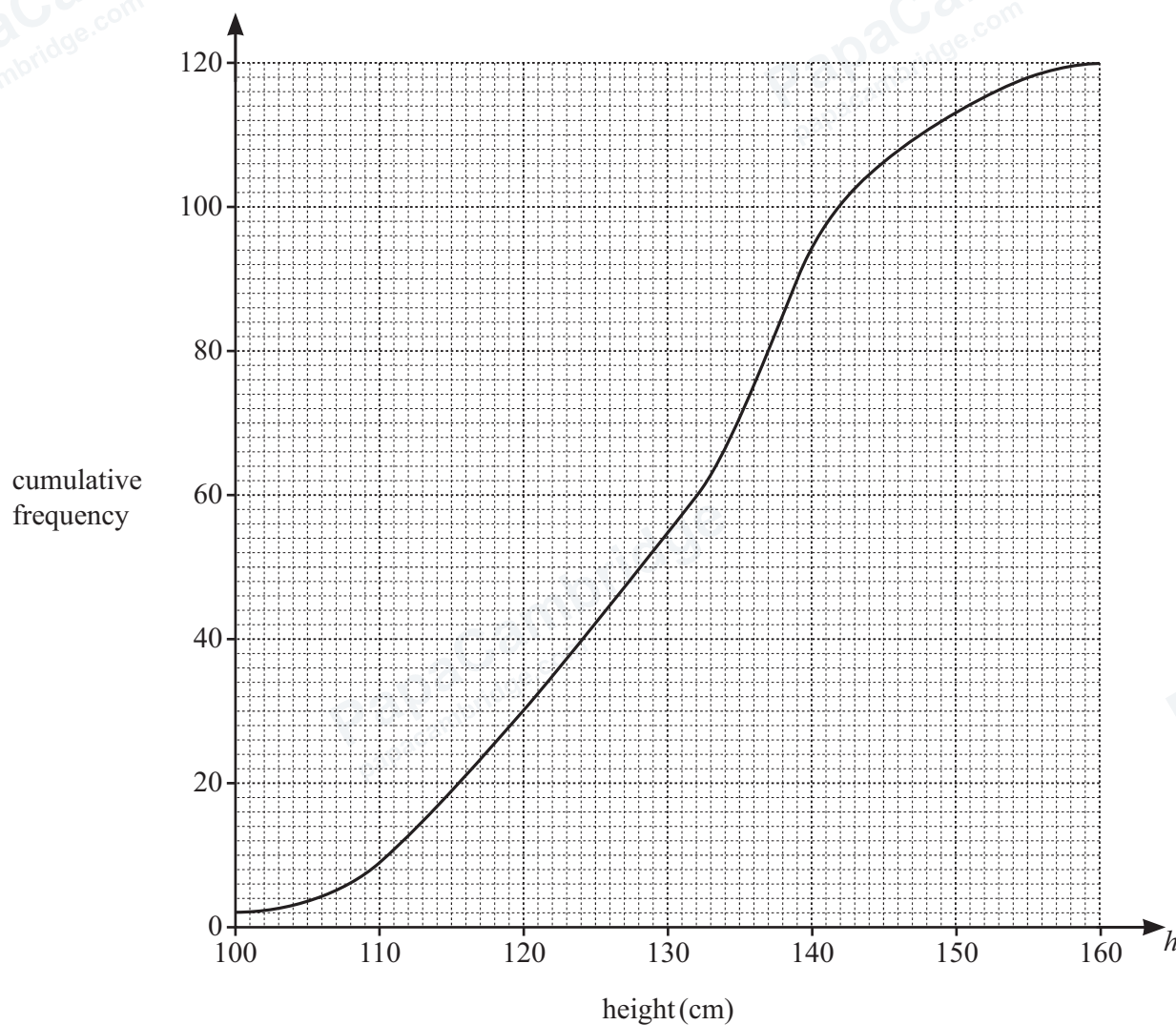


[1]

12 Factorise $2xy - 2ay - bx + ab$.

..... [2]

- 13 The cumulative frequency diagram shows the heights of 120 students.



Use the cumulative frequency diagram to find an estimate for

- (a) the interquartile range

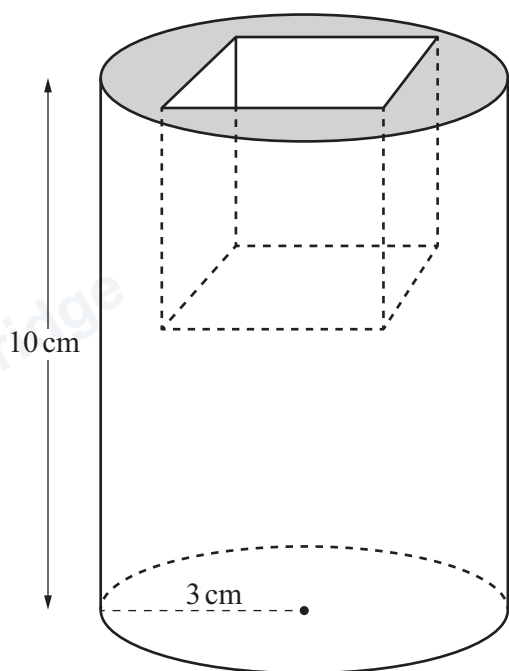
..... cm [2]

- (b) the number of students that have a height of more than 145 cm.

..... [2]



14 The diagram shows a solid.



NOT TO SCALE

The solid is formed by removing a cube from the top of a solid cylinder.

The radius of the cylinder is 3 cm.

The height of the cylinder is 10 cm.

The cube has side length x cm.

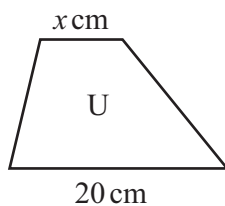
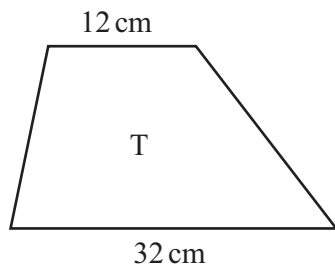
The total surface area of the solid is 300 cm^2 .

Find the value of x .

$x = \dots\dots\dots$ [5]



15 The diagram shows 2 trapeziums.



NOT TO SCALE

Trapezium U is mathematically similar to trapezium T.

(a) Find the value of x .

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

(b) The area of trapezium U is 80 cm^2 .

Find the area of trapezium T.

$\dots\dots\dots \text{ cm}^2$ [2]



- 16 p varies inversely as the cube of x .
 $p = 2$ when $x = 2$.

(a) Find p in terms of x .

..... [2]

- (b) r varies directly as the square root of p .
 $r = 24$ when $p = 64$.

Find r in terms of x .

Give your answer in the form $r = ax^b$ where a and b are constants.

..... [4]

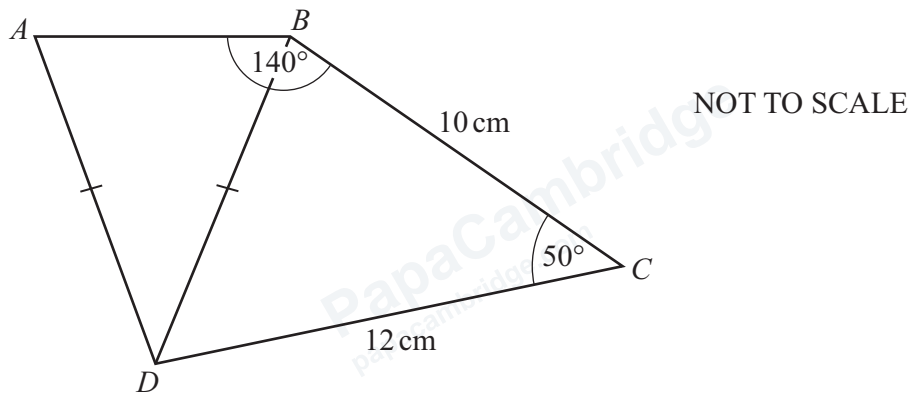


- 17 Use a graphical method to solve the inequality $x^2 + 3x - 6 > 0$.
Show a sketch of your graph.

..... [4]



- 18 The diagram shows a quadrilateral.



Triangle ABD is isosceles with $AD = BD$.
 Angle $ABC = 140^\circ$ and angle $BCD = 50^\circ$.

Calculate angle ADB .

angle $ADB = \dots\dots\dots$ [6]



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