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CAMBRIDGE
International Education

Cambridge IGCSE™

CANDIDATE NAME

CENTRE NUMBER

CANDIDATE NUMBER

* 6097633699 *

CAMBRIDGE INTERNATIONAL MATHEMATICS **0607/43**

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 **12** pages.

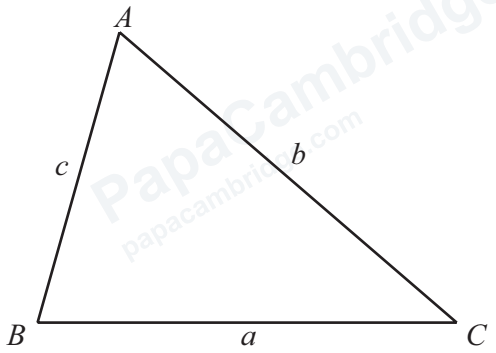
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List of formulas

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 Write 705.180 20

(a) correct to the nearest 10

..... [1]

(b) correct to 3 decimal places.

..... [1]

2 Solve.

$$5x + 13 = 8$$

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

3 Work out.

$$(3.1)^3 - \sqrt{18.5}$$

..... [1]

4 $X = c^2 - 9d^2$

(a) Find the value of X when $c = 10.4$ and $d = 3.2$.

..... [1]

(b) Rearrange the formula to write d in terms of X and c.

$d =$ ..... [3]

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5 The table shows the marks scored by 50 students in a test.

mark	1 to 5	6 to 10	11 to 15	16 to 20	21 to 25	26 to 30	31 to 35
frequency	1	3	7	12	9	11	7

(a) One of these students is chosen at random.

Find the probability that this student scored more than 25 marks.

..... [1]

(b) Find

(i) the modal class

..... [1]

(ii) the group that contains the median.

..... [1]

6 The volume of a cube is $729x^6$ cm^3.

Find an expression, in terms of x, for the total surface area of this cube.

..... cm^2 [3]

7 480 is shared in the ratio $x : y$.

Find an expression for each share.

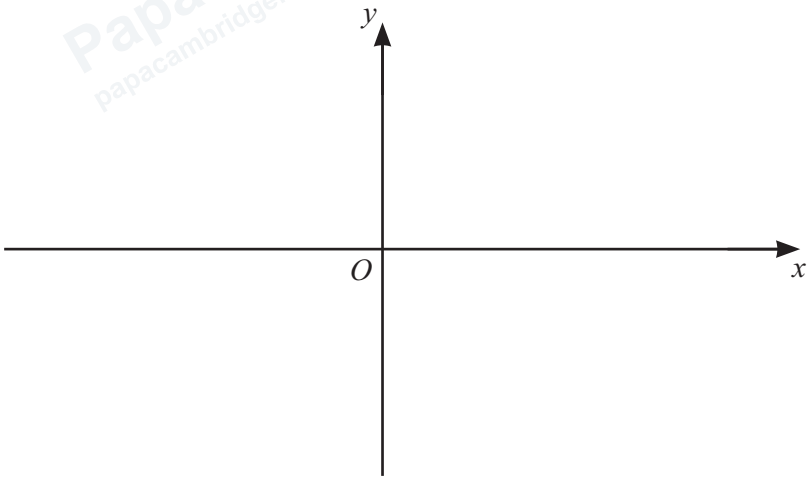
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8 You may use the axes below to help you answer this question.



The transformation P is a reflection in the line $x = 0$.
The transformation Q is a rotation of 90° clockwise about the origin.

(a) Find the image of the point with coordinates (4, 2) under the transformation P.

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

(b) Find the image of the point with coordinates (1, 5) under the transformation Q.

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

(c) Describe fully the **single** transformation equivalent to transformation P followed by transformation Q.

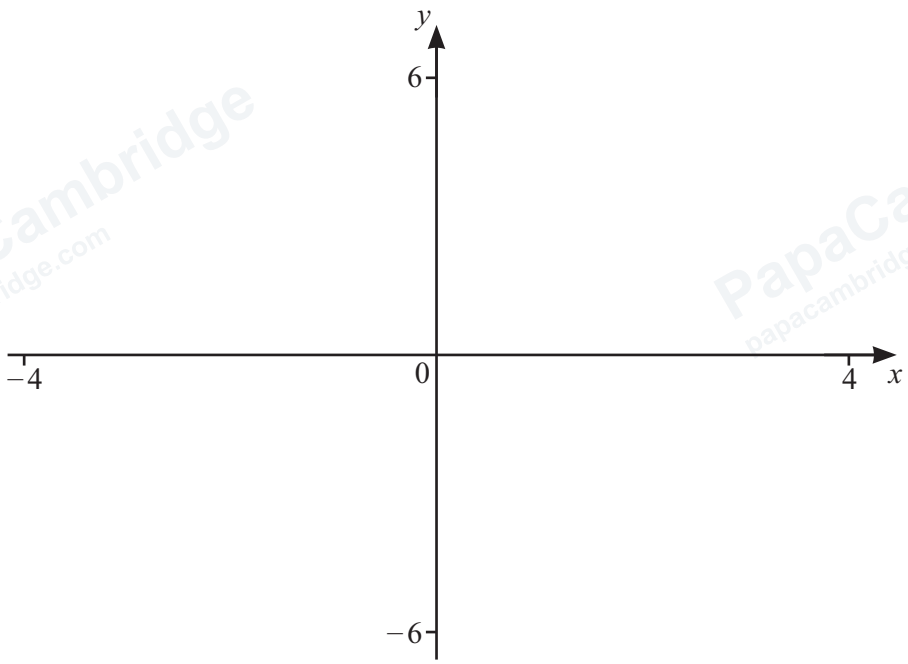
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(a) $f(x) = \frac{1}{x-2} + \frac{3}{2x-1}$

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

(ii) Write down the equations of the asymptotes parallel to the y-axis.

..... [2]

(iii) The line $y = k$ meets the curve $y = \frac{1}{x-2} + \frac{3}{2x-1}$ once.

Find the value of k.

$k =$ ..... [1]

(b) $g(x) = x - 1$

On the diagram, sketch the graph of $y = g(x)$ for values of x between -4 and 4. [1]

(c) Solve $f(x) = g(x)$.

..... [3]

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10 The table shows the marks of 10 students in a French exam and a Spanish exam.

French mark (x)	18	22	31	36	42	48	55	63	69	76
Spanish mark (y)	34	42	43	55	48	58	59	68	72	79

(a) Find the mean French mark.

..... [1]

(b) (i) Find the equation of the regression line for y in terms of x.

$y =$ ..... [2]

(ii) Use your answer to **10(b)(i)** to estimate the Spanish mark when the French mark is 25.

..... [1]

(c) Two of the students who scored more than 40 in the French exam are chosen at random.

Find the probability that they both scored more than 50 in the Spanish exam.

..... [2]

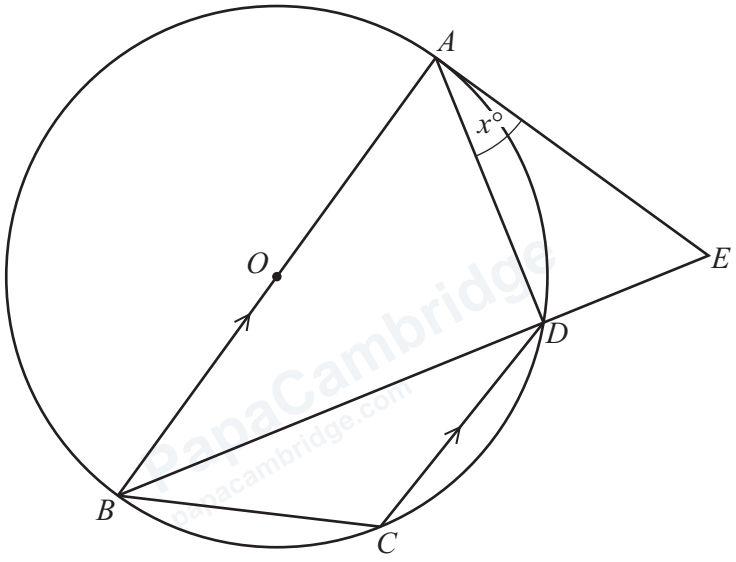
11 Expand and simplify $(x-3)(x+2)(2x-1)$.

..... [3]

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NOT TO SCALE

A, B, C and D lie on a circle centre O.
AOB is a diameter and BDE is a straight line.

AE is a tangent to the circle at A.
AB is parallel to DC.
Angle $DAE = x°$.

Find, in terms of x,

(a) angle ABD

angle ABD = ... [1]

(b) angle CDB

angle CDB = ... [1]

(c) angle BCD

angle BCD = ... [1]

(d) angle CBD.

angle CBD = ... [1]

13 Factorise $16x^2 - 9y^2$.

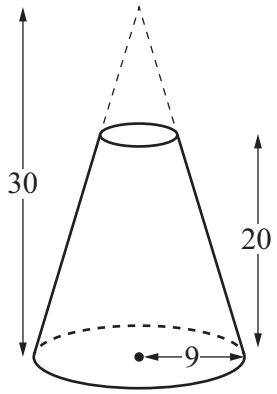
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NOT TO SCALE

The diagram shows the frustum of a cone.
The frustum has a base radius of 9 cm and a vertical height of 20 cm.
The vertical height of the original cone is 30 cm.

(a) Calculate the volume of the frustum.

..... cm^3 [3]

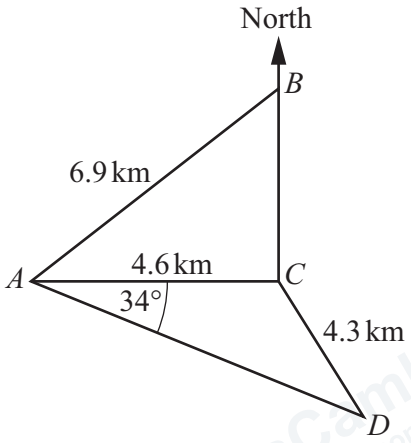
(b) Calculate the surface area of the frustum.

..... cm^2 [5]

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NOT TO SCALE

The diagram shows four points A, B, C and D.
B is due North of C.
C is due East of A.

(a) Find the bearing of D from A.

..... [1]

(b) Find BC.

$BC =$ ..... km [3]

(c) Angle BCD is obtuse.

Find the bearing of D from C.

..... [4]

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16 Raul bought a house on 1 January 2024.
On 1 January 2025 the value of the house increased by 8%.
On 1 January 2026 the value of the house increased by 5% of its value on 1 January 2025.

The value of the house on 1 January 2026 was $90 720.

(a) Calculate the amount Raul paid for the house on 1 January 2024.

$ ..... [3]

(b) From 2026 the value of the house increases exponentially at the rate of 5% each year.
The value of the house on 1 January 2026 was $90 720.

Find the year in which the value of the house on 1 January will first be greater than $200 000.

..... [4]

Question 17 is on the back page.

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17 **(a)** Use a graphical method to solve the equation $2^x = 0.5x + 1.5$.
Show a sketch of your graph.

$x =$ ..... or $x =$ ..... [4]

(b) Solve the inequality $2^x > 0.5x + 1.5$.

..... [2]

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