

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
General Certificate of Secondary Education

MATHEMATICS C
(Graduated Assessment)



1966/2337A

MODULE M7 – SECTION A

Wednesday **29 JUNE 2005** Morning 30 minutes

Candidates answer on the question paper.

Additional materials:

- Geometrical instruments
- Tracing paper (optional)

Candidate
Name

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Centre
Number

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Candidate
Number

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TIME 30 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers on the dotted lines unless the question says otherwise.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- There is a space after most questions. Use it to do your working. In many questions marks will be given for a correct method even if the answer is incorrect.
- Do not write in the bar code. Do not write in the grey area between the pages.
- **DO NOT WRITE IN THE AREA OUTSIDE THE BOX BORDERING EACH PAGE. ANY WRITING IN THIS AREA WILL NOT BE MARKED.**

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is 25.

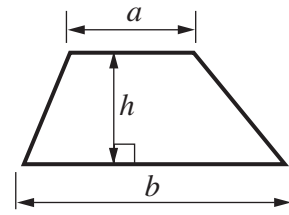
WARNING
**You are not allowed to use a
calculator in Section A of this paper.**

FOR EXAMINER'S USE	
Section A	
Section B	
TOTAL	

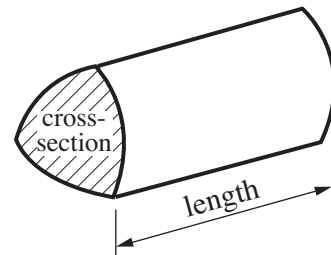
This question paper consists of 7 printed pages and 1 blank page.

Formulae Sheet

Area of trapezium = $\frac{1}{2}(a + b)h$



Volume of prism = (area of cross-section) \times length



- 1 Use ruler and compasses only to answer this question.
Leave in all your construction lines.

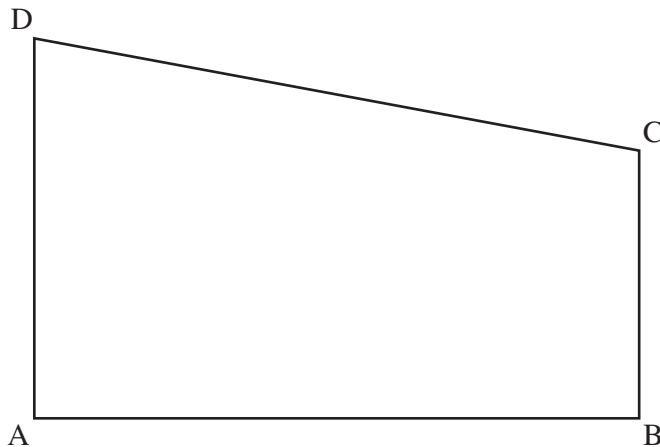
(a) The line PQ is one side of an **equilateral** triangle PQR.

Complete the triangle.



[1]

(b)



The diagram shows a scale drawing, ABCD, of a garden.
The scale is **1 cm to 5 m**.

A rose bush, R, is:

- Equidistant from AD and DC.
- 30 m from B.

Construct and label the position of R.

[3]



[Turn over

2 (a) Write 350 as the product of its prime factors.

(a)[2]

(b) Find the highest common factor (HCF) of 350 and 105.

(b)[2]

4

3 **Estimate** the answer to this calculation.
Show clearly the values you use.

$$\frac{\sqrt{143 \cdot 7}}{0.49}$$

.....[2]

2

4 Solve.

(a) $3(2x + 4) = x - 13$

(b) $\frac{10 + 2x}{3} = 7$

(c) $2x - 3 > 6$

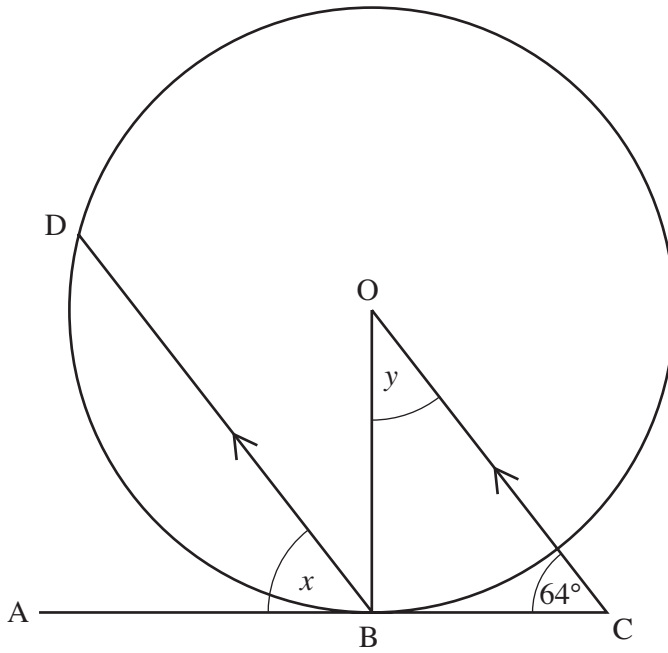
(a)[3]

(b)[3]

(c)[2]

8

[Turn over



Not to scale

ABC is a tangent to the circle, centre O.
 DB is parallel to OC.
 Angle OCB = 64° .

- (a) Find angle x .
 Give a reason for your answer.

(a) $x = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$ [2]

- (b) Work out angle y .
 Give reasons for your answer.

(b) $y = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$ [2]

- 6 (a) The equation of a straight line is $y = 3x - 2$.

Write down the coordinates of the point where this line crosses the y -axis.

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

- (b) Rearrange $y = 3x - 2$ to make x the subject.

(b)[2]

3
