OCR
RECOGNISING ACHIEVEMENT

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
General Certificate of Secondary Education

MATHEMATICS C
(Graduated Assessment)

1966/2338B

MODULE M8 – SECTION B

Wednesday **29 JUNE 2005** Morning 30 minutes

Candidates answer on the question paper.
Additional materials:
Geometrical instruments
Tracing paper (optional)
Scientific or graphical calculator

Candidate Name	

Centre Number						Candidate Number				

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

- You are expected to use a calculator in Section B of this paper.
- 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.
- Section B starts with question 8.
- Use the π button on your calculator or take π to be 3·142 unless the question says otherwise.

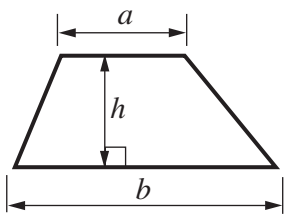
FOR EXAMINER'S USE	
Section B	

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

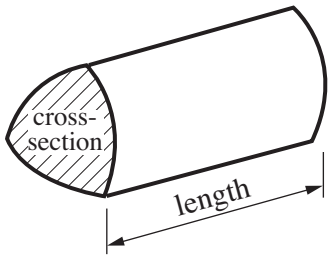
[Turn over

Formulae Sheet

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



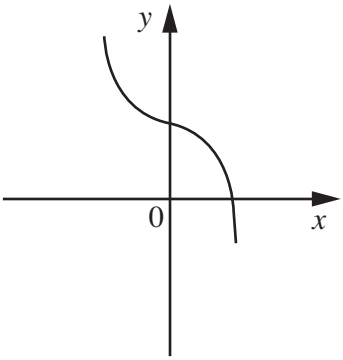
Volume of prism = (area of cross-section) × length



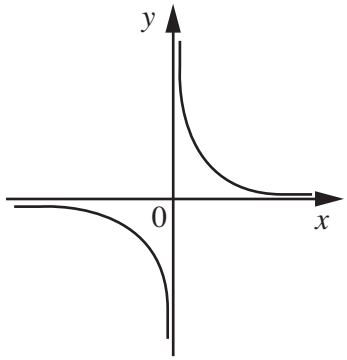
8 For each of the sketch graphs below, choose the correct equation from this list.

$y = 2 + x^3$ $\quad y = \frac{-2}{x}$ $\quad y = 2 - x^3$ $\quad y = \frac{2}{x}$

(a)



(b)



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

2

9 **(a)** Factorise.

$$4ab - 2ac$$

(a) .....[2]

(b) Rearrange this formula to make x the subject.

$$4(x - y) = 3y + 2$$

(b) .....[3]

(c) Solve.

$$x^2 + x - 12 = 0$$

(c) .....[3]

8

10 Bronwyn bought a car for £16 500.
The value of the car depreciates by 15% in its first year.
Each year after that the car depreciates by 10% of its value at the beginning of the year.

An image has been removed due to third party copyright restrictions

Details:

An image of a car for sale at £16500

What is the value of her car 3 years after she bought it?

£ .....[4]

4

11 Solve algebraically these simultaneous equations.

$$2x + 5y = 1$$
$$3x + 2y = 7$$

$x =$ .....

$y =$ .....[4]

4

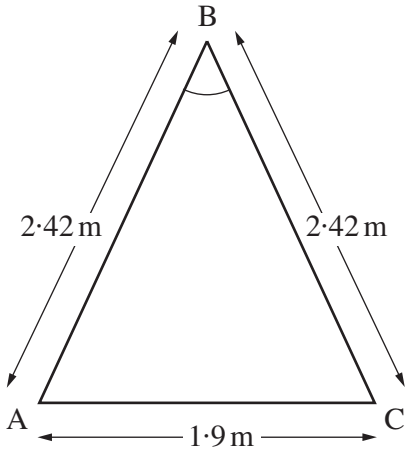
12 **(a)** The diameter of a children's roundabout is 272 cm to the nearest centimetre.

What are the lower and upper bounds of the diameter?

(a) lower bound .....cm

upper bound .....cm [2]

(b) This is a side view of the frame, ABC, of a child's swing.



Not to scale

AB = BC = 2·42 m and AC = 1·9 m.

Calculate angle ABC.

(b) .....° [5]

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