

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
General Certificate of Secondary Education

MATHEMATICS C
(Graduated Assessment)



1966/2337B

MODULE M7 – SECTION B

Monday **23 JANUARY 2006** Morning 30 minutes

Candidates answer on the question paper.

Additional materials:

- Geometrical instruments
- Tracing paper (optional)
- Scientific or graphical calculator

Candidate Name

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

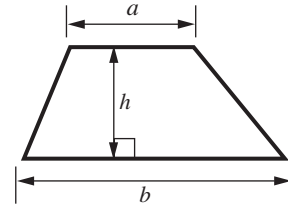
- You are expected to use a calculator in Section B of this paper.
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is 25.
- Section B starts with question 8.
- Use the π button on your calculator or take π to be 3.142 unless the question says otherwise.

FOR EXAMINER'S USE	
Section B	

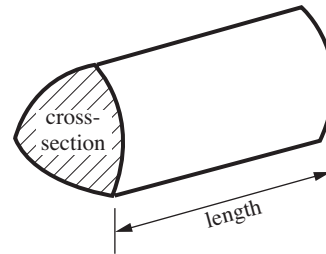
This question paper consists of 7 printed pages and 1 blank page.

2
Formulae Sheet

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



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



8 Calculate.

$$\sqrt{7 \cdot 3^2 + 4 \cdot 6}$$

Give your answer correct to 3 significant figures.

.....[2]

2

9 (a)



Tamasin and Charles go strawberry picking.
Tamasin pays £8.40 for 2 kg of strawberries.
Charles picks $4\frac{1}{2}$ kg of strawberries.

How much does Charles pay?

(a) £.....[2]

(b) A recipe for strawberry jam uses strawberries and sugar in the ratio 3 : 2.
Charles uses $4\frac{1}{2}$ kg of strawberries to make jam.

How much sugar does he use?

(b) kg [2]

4

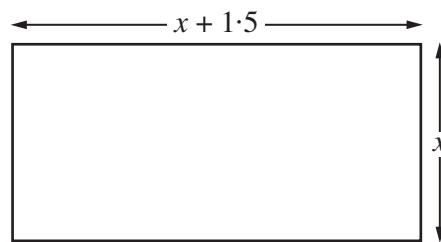
[Turn over

10 (a) Solve.

$$3x - 4 = x + 5$$

(a)[3]

(b)



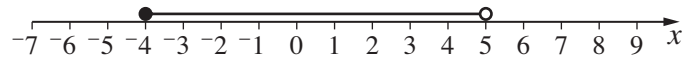
The width of a rectangle is x cm.
The length is 1.5 cm more than the width.
The perimeter of the rectangle is 17 cm.

Write down an equation satisfied by x
and solve it to find x .

(b)[3]

6

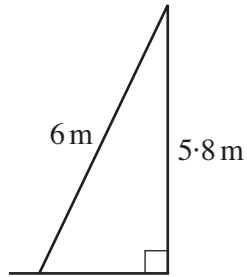
- 11 Write an inequality for the range of values of x represented on this number line.



.....[2]

2

- 12



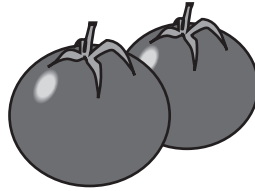
Not to scale

Jonathan is using a ladder of length 6 m.
He places the ladder against a vertical wall.
The top of the ladder reaches 5.8 m up the wall.

How far is the foot of the ladder from the wall?
Give the units of your answer.

.....[4]

4



Geoff picks 40 tomatoes and weighs them.
The results are summarised in the table below.

Mass (m grams)	Frequency	Mid-interval value
$0 \leq m < 25$	6	12.5
$25 \leq m < 50$	10	37.5
$50 \leq m < 75$	16	62.5
$75 \leq m < 100$	8	87.5

(a) Calculate an estimate of the mean mass of the tomatoes.

(a) g [3]

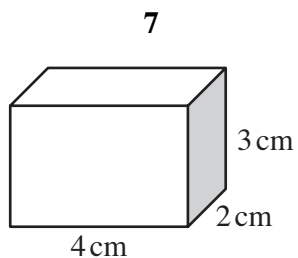
(b) Geoff takes one of these tomatoes at random.

What is the probability that it weighs **at least** 50 grams?

(b) [1]

4	
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14



A solid cuboid is made of brass.
It measures 4 cm by 2 cm by 3 cm.
It weighs 204 g.

Calculate the density of the brass.

..... g/cm³ [3]

3
