

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
General Certificate of Secondary Education

MATHEMATICS C
(Graduated Assessment)



1966/2337B

MODULE M7 – 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

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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

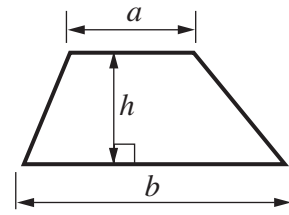
- You are expected to use a calculator in Section B of this paper.
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is 25.
- Section B starts with question 7.
- Use the π button on your calculator or take π to be 3.142 unless the question says otherwise.

FOR EXAMINER'S USE	
Section B	

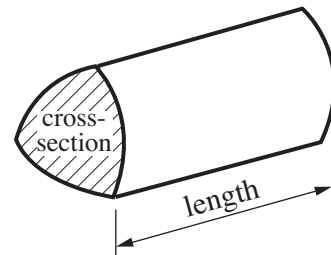
This question paper consists of 7 printed pages and 1 blank page.

Formulae Sheet

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



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



7 Janine, Carrie and Jay all buy the same type of ham from a supermarket.

Janine buys 400 g of ham for £2.56.

(a) Carrie buys 350 g of ham.

How much does she pay?

(a) £.....[2]

(b) Jay pays £7.36 for his ham.

How much does his ham weigh?
Give your answer in kilograms.

(b)kg [3]

5

8 Calculate.

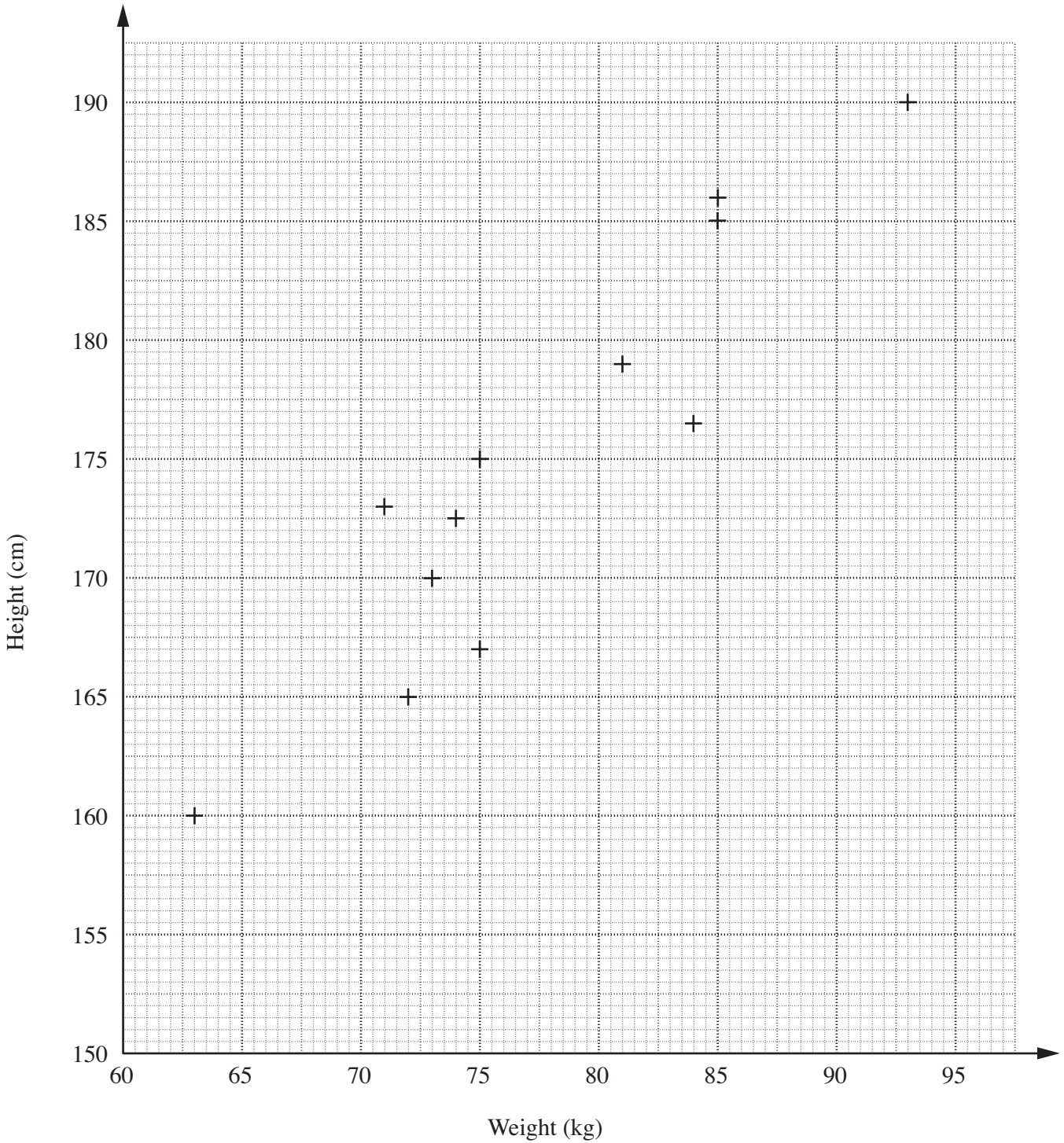
$$\sqrt{14 \cdot 28^3 - 21 \cdot 5^2}$$

Give your answer correct to 3 significant figures.

.....[2]

2

- 9 (a) The heights and weights of twelve sixth form boys were measured. The scatter diagram shows the results.



Another sixth former, Paul, is 172 cm tall.

Draw a line of best fit and use it to estimate Paul's weight.

(a)kg [2]

- (b) There are eighty girls in the sixth form.
Their heights are summarised in the table below.

Height (h cm)	Frequency
$150 < h \leq 160$	12
$160 < h \leq 170$	29
$170 < h \leq 180$	32
$180 < h \leq 190$	7

- (i) Calculate an estimate of the mean height.

(b)(i)cm [4]

- (ii) One of these eighty girls is picked at random.

What is the probability that she is more than 180 cm tall?

(ii)[1]

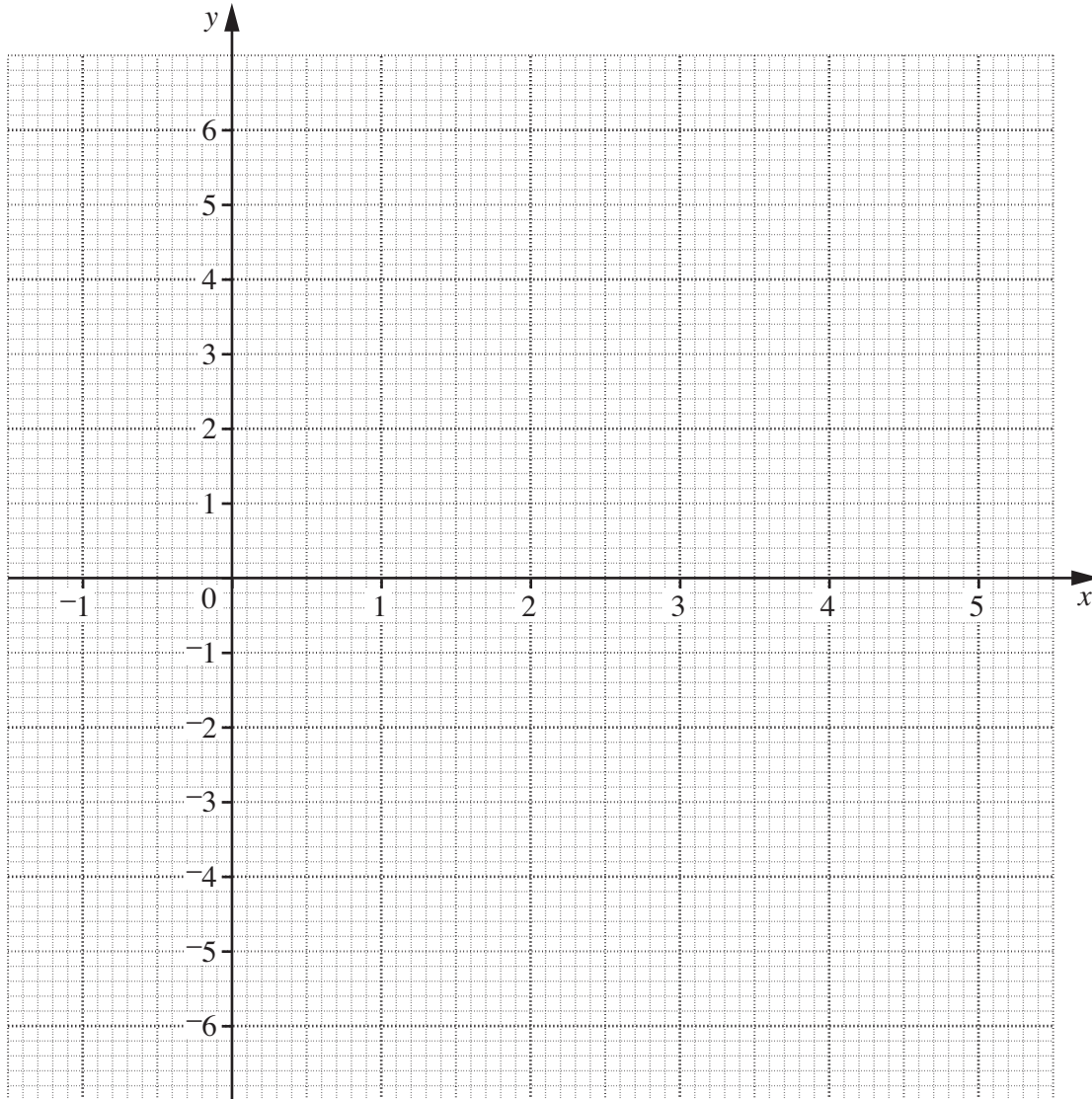
7	
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10 (a) Complete the table below for $y = 4x - x^2$.

x	-1	0	1	2	3	4	5
y	-5		3	4	3	0	

[1]

(b) Draw the graph of $y = 4x - x^2$ on the grid below.



[2]

(c) Use your graph to solve the equation $4x - x^2 = 2$.

(c)[2]

5

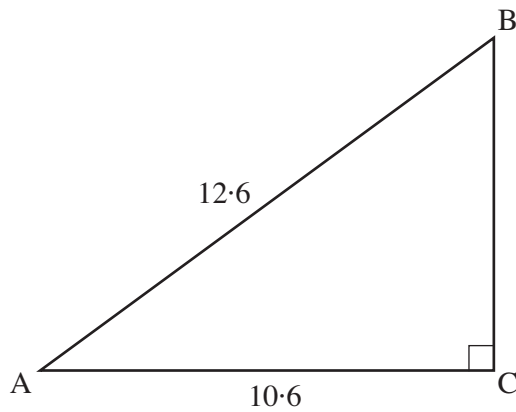
11 Smita took part in a sponsored walk.

- (a) The first part of the walk was 12.6 miles.
She walked this at an average speed of 2.4 mph.

Calculate how long she took to walk 12.6 miles.
Give your answer in hours and minutes.

(a) hmins [3]

(b)



Not to scale

The diagram shows the whole walk.
The distances are in miles.

Calculate the distance BC.

(b)miles [3]

6
