

### **OXFORD CAMBRIDGE AND RSA EXAMINATIONS**

**General Certificate of Secondary Education** 

MATHEMATICS C (Graduated Assessment)



MODULE M6 - 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**

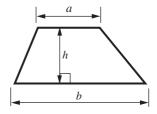
- You are expected to use a calculator in Section B of this paper.
- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this Section is 25.
- Section B starts with question 7.
- Use the  $\pi$  button on your calculator or take 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

### Formula Sheet

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



7

## An image has been removed due to third party copyright restrictions

Details:

An image of a painting roller

Apple-white paint is made by mixing white paint and green paint in the ratio 7 : 1.

How much green paint is needed to make 1000 millilitres of apple-white paint?

ml [2]	
2	_

- 8 Calculate.
  - (a)  $3.2^2 \sqrt{2.56}$

Give your answer correct to 2 decimal places.



3

**9** (a) Complete the table of values for y = 2x - 1.

x	-3	0	3
у	<del>-</del> 7		

**(b)** On the axes below draw the graph of y = 2x - 1.

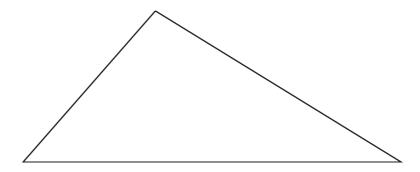
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[2]

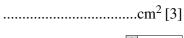
[1]



### 10 This triangle is drawn accurately.

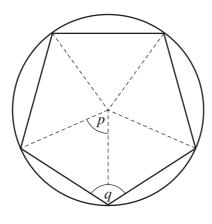


Use measurements from the diagram to calculate the area of the triangle in square centimetres. Show clearly the measurements you use.



3

11



Not to scale

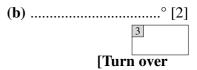
The diagram shows a regular pentagon drawn inside a circle.

### Calculate

(a) the angle at the centre, p,



(b) the interior angle, q.



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An image of a bicycle

The rear wheel of Jane's bid	ycle has a diameter o	of 0·63 m.
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(a) (i) Calculate the circumference of the rear wheel.

Calculate her average speed in kilometres per hour.

			(a)(i)m [2]
	(ii)	Jane cycles 3 km to school.	
		Show that the rear wheel makes more than 1500 complete turns during her journey.	
(b)	lt ta	akes Jane 15 minutes to cycle the 3 km to school.	[2]

(b)	km/h	[2]
-----	------	-----

6

13 This stem and leaf diagram shows the speeds, in miles per hour, of thirty cars travelling along a road.

Key						8	7	7	6	5	5	0	3
3   5 represents 35	9	9	9	8	7	7	7	6	6	5	0	0	4
·		5	5	5	4	4	3	0	0	0	0	0	5

(-)	T:
(a)	Hind

	_	
(i)	tha	median.
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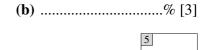
(a)(i)	mph [	1
()(-)		

(ii) the range.

( <b>ii</b> )mph [	1	
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**(b)** The speed limit on the road is 50 mph. Drivers travelling at **more than** 50 mph will be fined.

What percentage of the thirty drivers will be fined?



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