

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS**  
**General Certificate of Secondary Education**

**MATHEMATICS C**  
**(Graduated Assessment)**



**1966/2331B**

**MODULE M1 – SECTION B**

Wednesday **29 JUNE 2005** Morning 30 minutes

Candidates answer on the question paper.

Additional materials:

- Geometrical instruments
- Tracing paper (optional)
- Electronic 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**

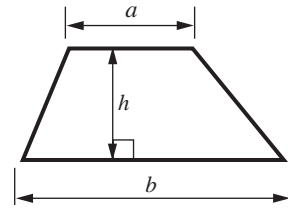
- You are expected to use a calculator in Section B of this paper.
- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this Section is 25.
- Section B starts with question 8.

<b>FOR EXAMINER'S USE</b>	
<b>Section B</b>	

**This question paper consists of 9 printed pages and 3 blank pages.**

## Formula Sheet

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



8 Amin is using this 100 square to make a number pattern.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

He makes his pattern by starting at **1**, counting forward 4 squares then down 1 square. This is the pattern.

**1            15            29            43            ...**

(a) What is the next number in the pattern?

(a) .....[1]

(b) Write down a calculation you can do to work out the next number.

.....[1]

2
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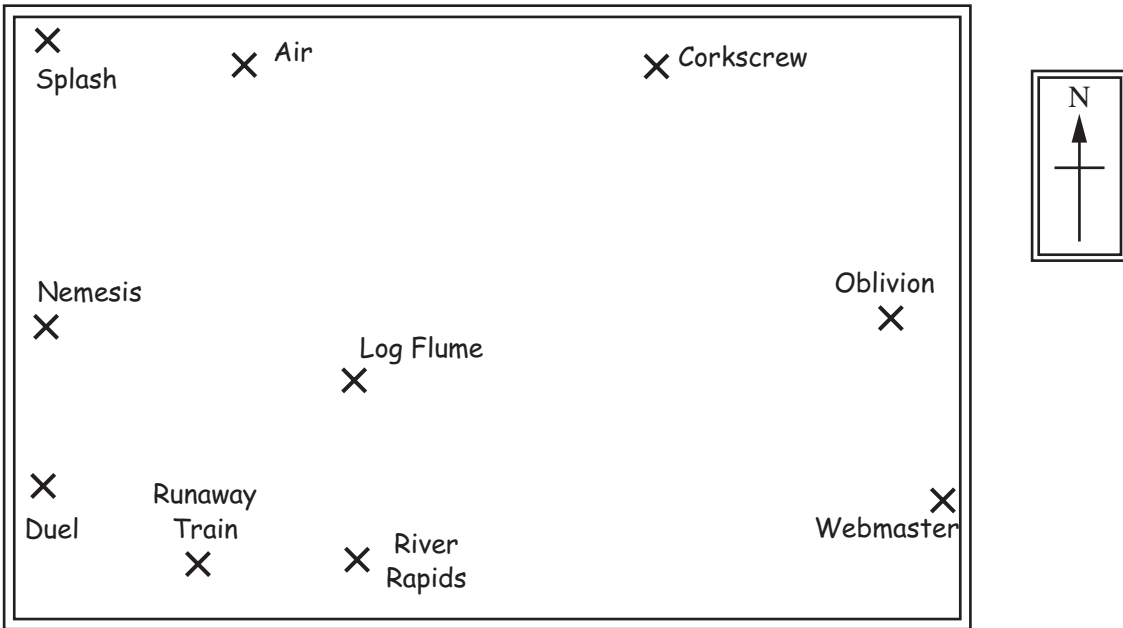
9 A school runs a trip to Alton Towers.

(a) Tickets cost £16.50 each.

Work out the cost of 140 tickets.

(a) £.....[2]

(b) This is a sketch map showing where the rides are.



(i) Gemma walks South from **Nemesis**.

Which ride does she get to next?

(b)(i) .....[1]

(ii) Karen walks North-west from the **Log Flume**.

Which ride does she get to next?

(ii) .....[1]

(iii) Nikki walks from **Nemesis** to the **River Rapids**.

Which compass direction is this?

(iii) .....[1]

- (c) Zara wants to go on her favourite rides first.  
Her favourites are Oblivion, Air and Nemesis.

Write down all the different possible ways she could go on the 3 rides.  
The list has been started for you.

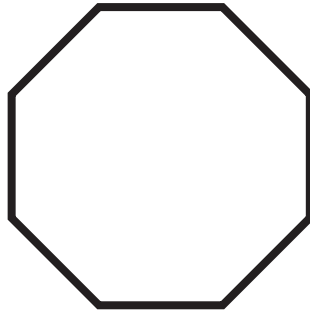
*You may not  
need all  
the lines*

Oblivion	Air	Nemesis

[2]

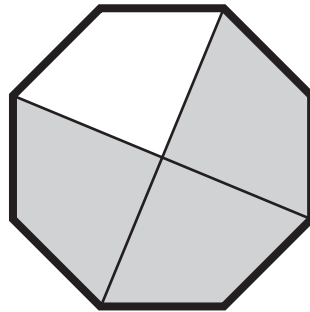
7
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10 (a) What is the name of this shape?



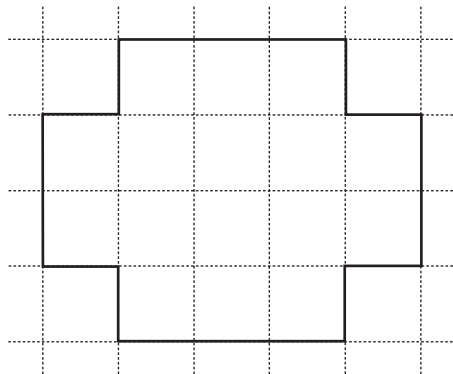
(a) .....[1]

(b) What fraction of this shape has been shaded?



(b) .....[1]

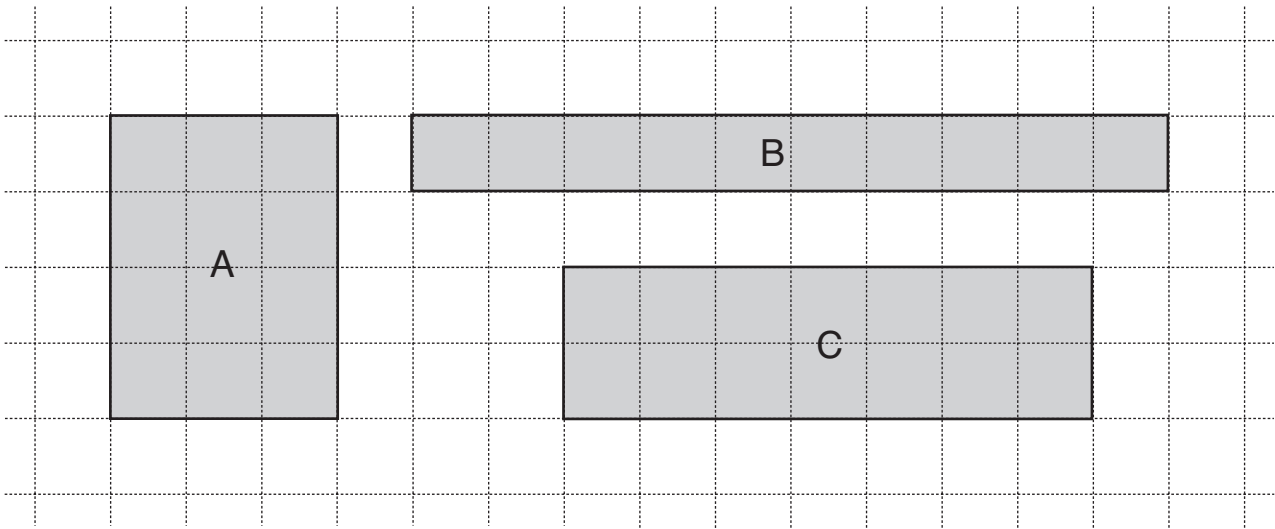
(c) Shade half of this shape.



[1]

3	
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11 Which of these shapes has the longest perimeter?



Complete these sentences.

Shape ..... has the longest perimeter.

Its perimeter is ..... cm.

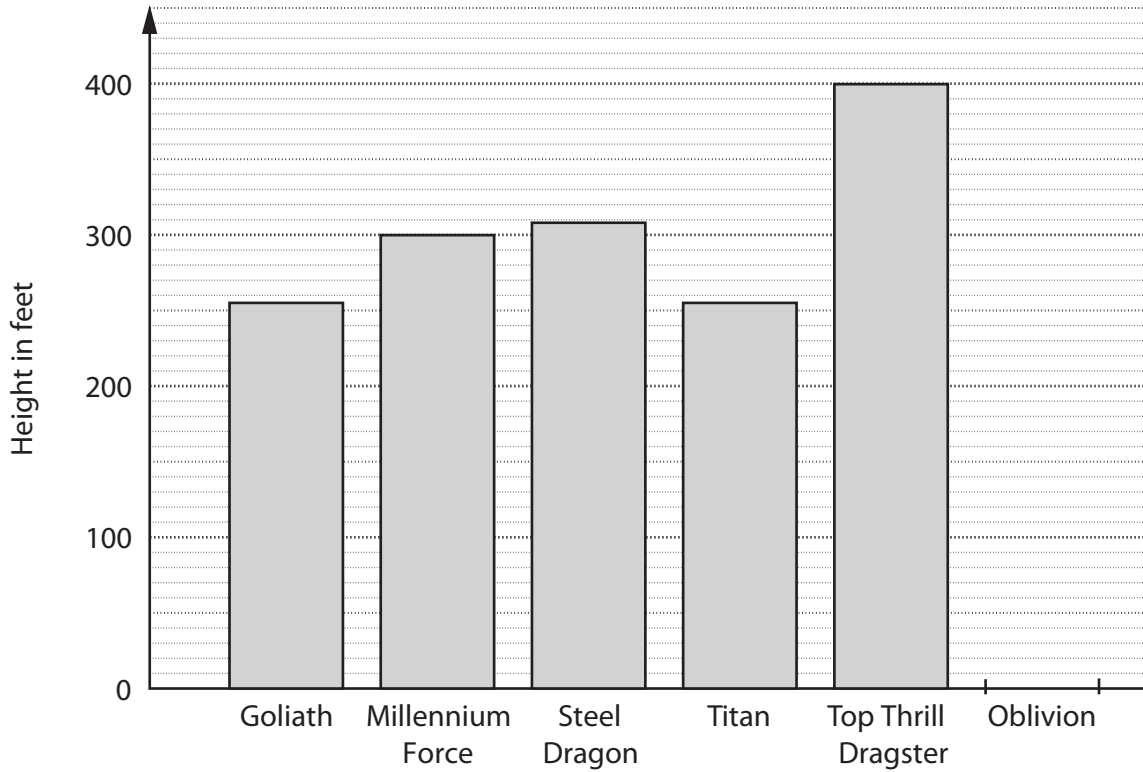
[3]

3

[Turn over

12 This bar chart shows the heights of the drops of the five tallest rollercoasters in the world.

An image has been removed due to third party copyright restrictions  
Details:  
An image of a rollercoaster



(a) Two of the rollercoaster drops are the same height.

What are these rollercoasters called?

..... and .....[1]

(b) Complete these sentences.

The rollercoaster with the biggest drop is called

..... [1]

The drop is ..... feet. [1]

(c) The rollercoaster Oblivion at Alton Towers has a drop of 180 feet.

Show this on the bar chart. [1]

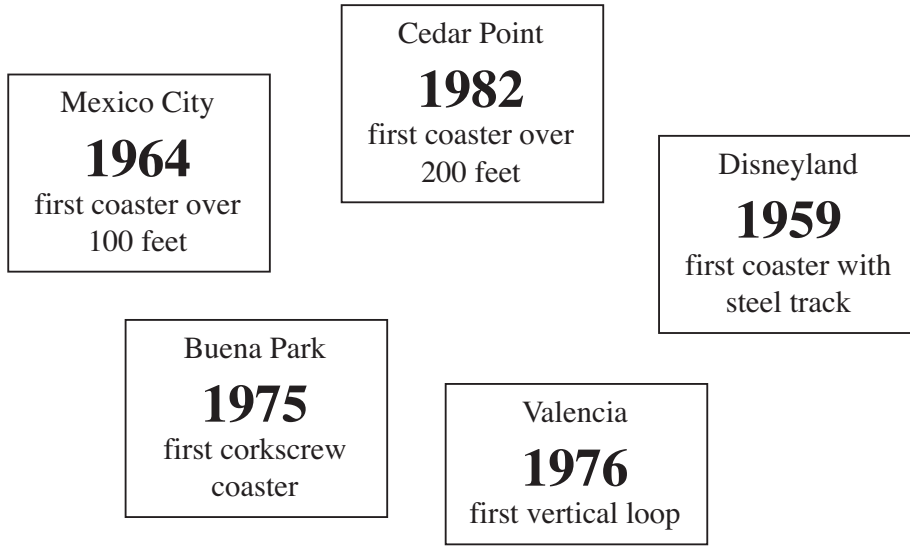


- (d) The longest rollercoaster in Britain is **The Ultimate** at Lightwater Valley. It is 7452 feet long.

Write 7452 in words.

.....  
 .....[1]

- (e) These are some important dates about rollercoasters.

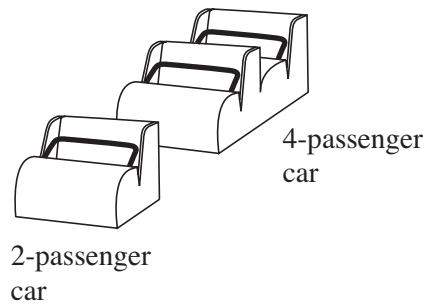


Write the dates in order, earliest first.

..... [2]  
 earliest

- (f) Top Thrill Dragster has six trains. Each train has three 4-passenger cars and two 2-passenger cars.

How many people altogether can the six trains hold?



- (f) .....[3]

10





