

Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION**

B274A

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M4 – SECTION A

THURSDAY 21 JANUARY 2010: Afternoon

DURATION: 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the Question Paper.

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

Geometrical instruments

Tracing paper (optional)

WARNING

**No calculator can be used for
Section A of this paper.**

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

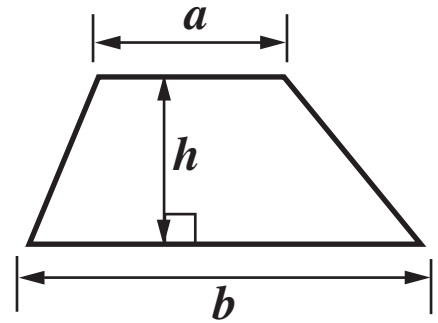
- **Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes on the first page.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully and make sure that you know what you have to do before starting your answer.**
- **Show your working. Marks may be given for a correct method even if the answer is incorrect.**
- **Answer ALL the questions.**
- **Write your answer to each question in the space provided, however additional paper may be used if necessary.**

INFORMATION FOR CANDIDATES

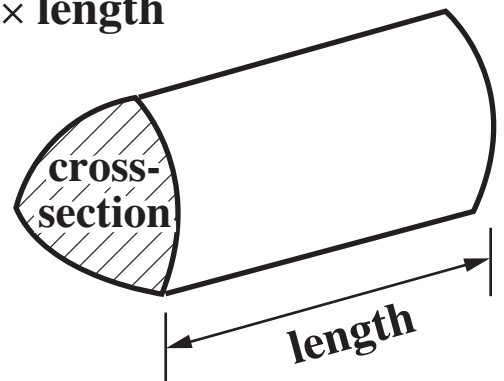
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

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

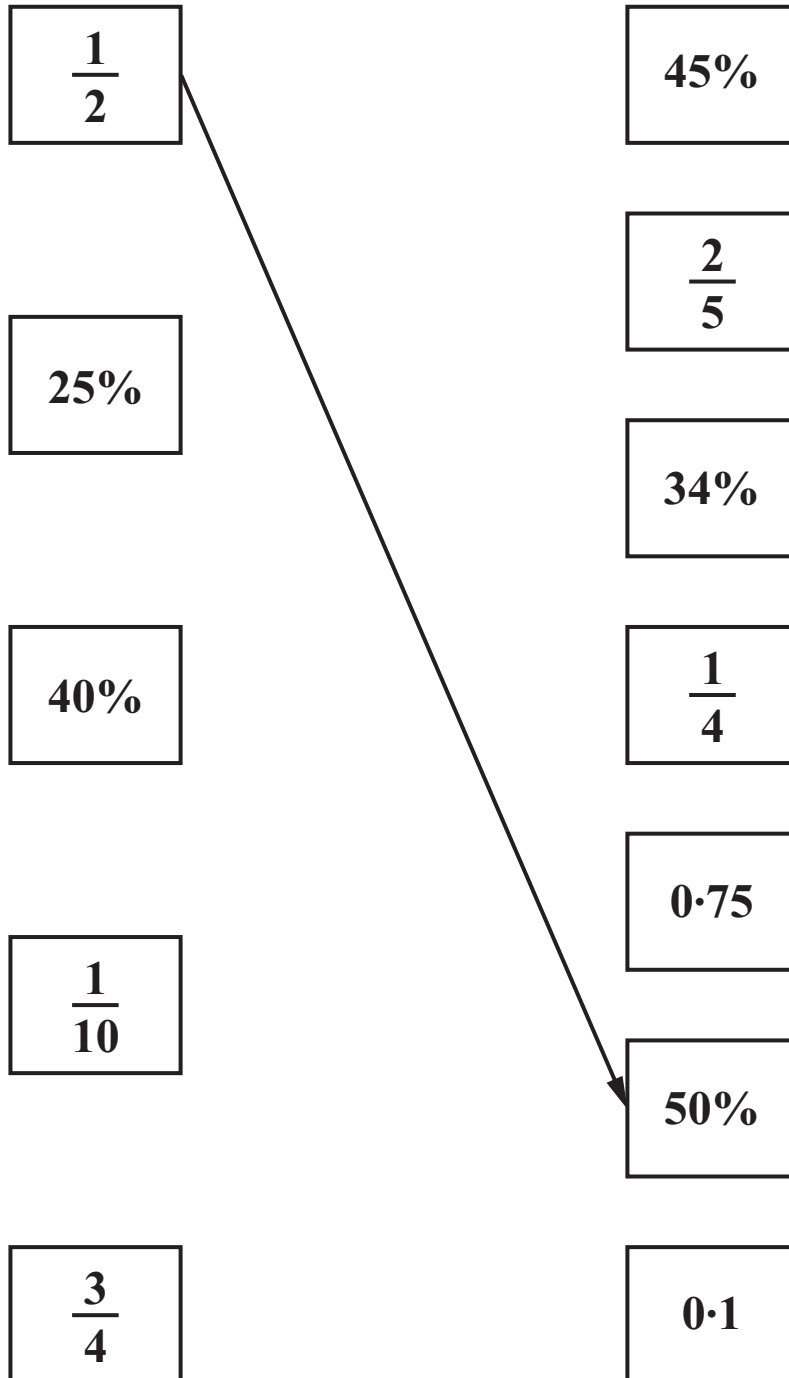


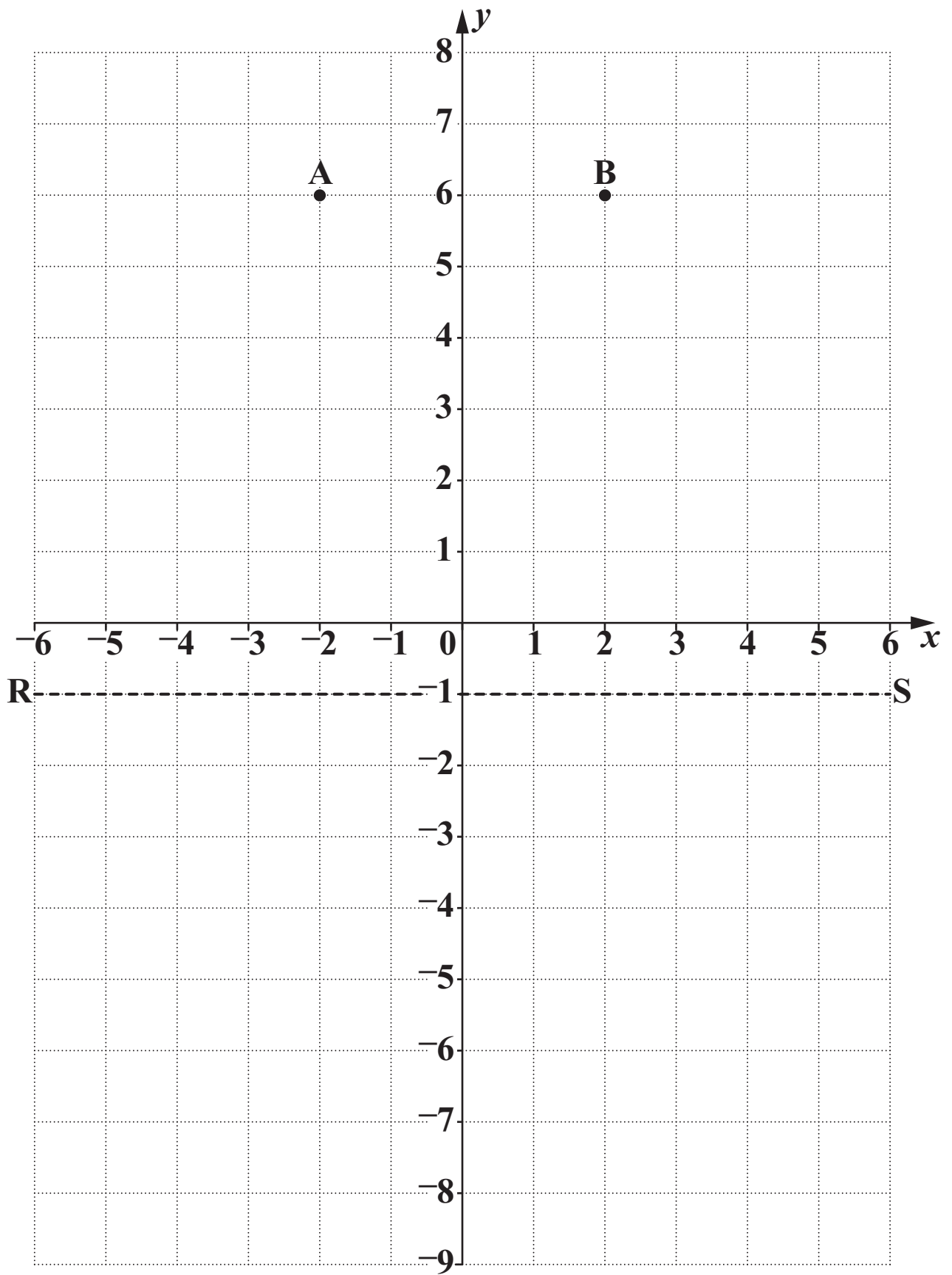
$$\text{Volume of prism} = (\text{area of cross-section}) \times \text{length}$$



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- 1 Link each value on the left to its equivalent value on the right.
One has been done for you.
[3 marks]**





- (a) Write down the coordinates of point A.**
[1 mark]

(a _____ , _____ **)**

- (b) (i) Plot point C at (-2, 3).**
[1 mark]

- (ii) Join the points A, B and C to make a triangle.**

What type of triangle is this?
[1 mark]

(b)(ii) _____

- (c) Reflect triangle ABC in the line RS.**
[1 mark]

3 Here are some patterns made from dots.

Pattern 1



Pattern 2



Pattern 3



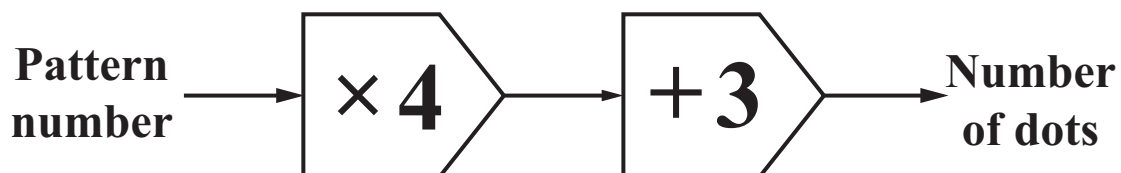
Pattern 4

(a) (i) Draw Pattern 4.
[1 mark]

(ii) How many dots are in Pattern 6?
Explain how you worked out your answer.
[2 marks]

_____ dots because _____

(b) This function machine gives the rule for a different pattern.



Use the function machine to complete the table.
[2 marks]

Pattern number	1	2	3	4
Number of dots	7			

**4 Danny and Victoria buy 3 meals, each costing £14.50.
They each work out the total cost.**

Danny says the total cost is £43.50.

Victoria says the total cost is £42.50.

Who has worked out the correct answer?

Show how you decided.

[2 marks]

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5 Here is a list of numbers.

4 6 8 9 10 13 18 20 25

Complete the sentences, using numbers from the list.

**(a) _____ is a factor of 63.
[1 mark]**

**(b) _____ is a prime number.
[1 mark]**

- 6 (a) This table shows the cost of hiring a caravan at Easycamp.
The price shown is the cost for one night.**

Number of beds	Price per night (£)		
	Standard	Superior	Deluxe
2	86	99	105
4	126	135	143
6	145	154	162
8	167	172	185

The Howard family hires a Superior 4-bed caravan for 15 nights.

**Work out the total cost of the caravan hire.
You must show your working.
[4 marks]**

(a) £ _____

(b) The campsite owner asked 200 families the following question.

How do you travel to the beach?

Their answers are recorded in this table.

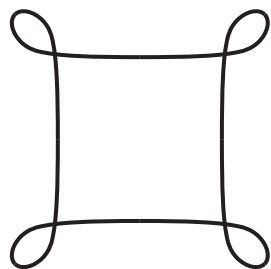
	Car	Walk	Cycle	Jog	Bus
Number of families	75	40	30	35	20

Use this information to find the probability that a family chosen at random walks to the beach.

[2 marks]

(b) _____

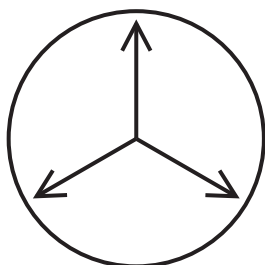
7 Write the order of rotation symmetry for each of the following 4 diagrams.
[3 marks]



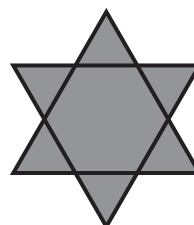
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