

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**

B275B

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M5 – SECTION B

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)

Pie chart scale (optional)

Electronic calculator

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

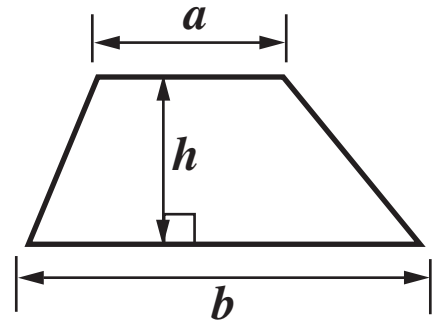
- **Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes on the first page.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully and make sure that you know what you have to do before starting your answer.**
- **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

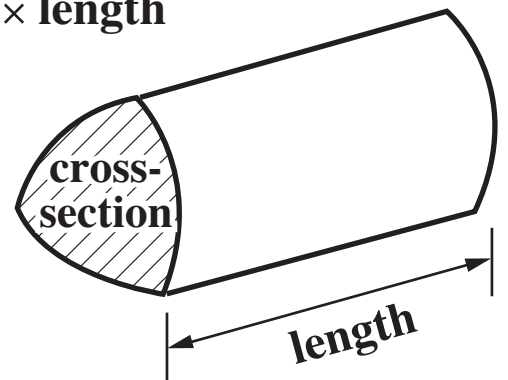
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **Section B starts with question 7.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

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



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

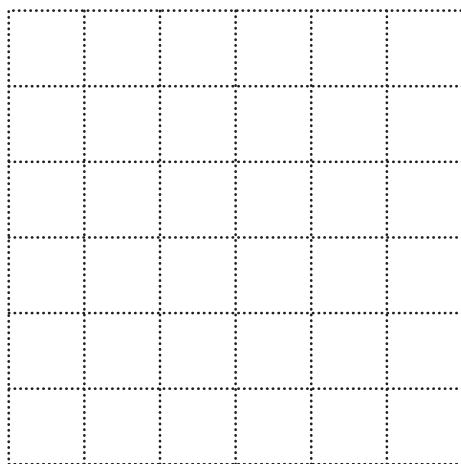


- 7 (a) Two different types of quadrilateral have all four sides equal.
One is a square.

Write down the name of the other.
[1 mark]

(a) _____

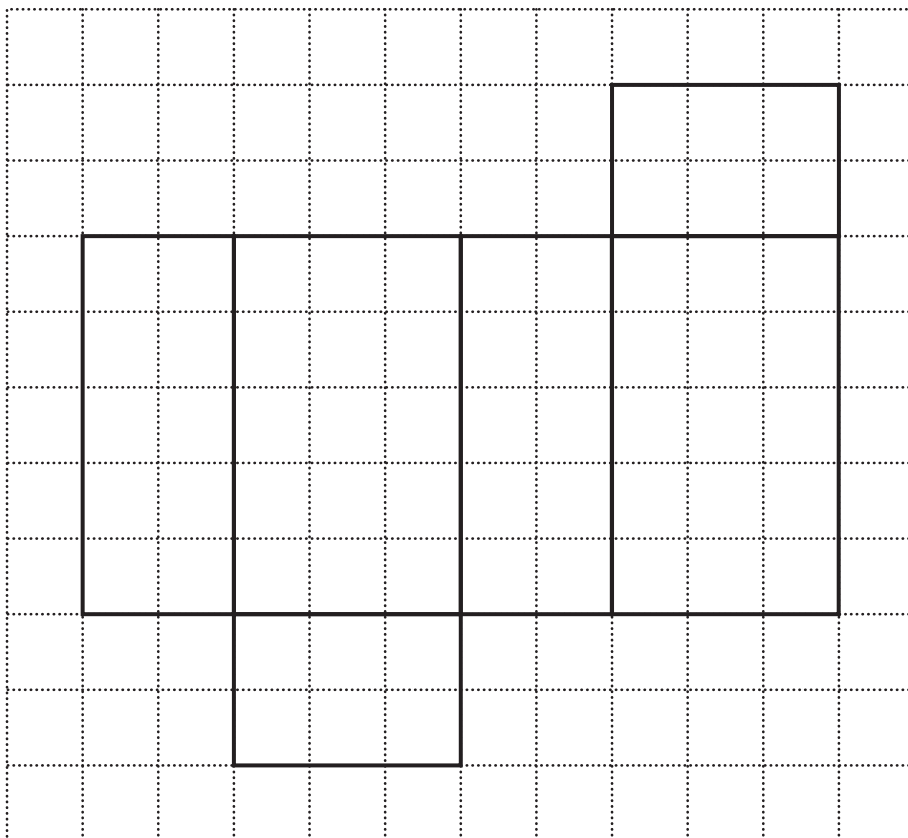
- (b) (i) Draw a kite on the grid below.
[1 mark]



- (ii) How many lines of symmetry does a kite have?
[1 mark]

(b)(ii) _____

8 (a) This is the full-sized net of a cuboid.



The net is folded to make the cuboid.

**(i) Complete the following.
[1 mark]**

**The cuboid measures _____ cm by _____ cm
by _____ cm.**

**(ii) Work out the volume of the cuboid.
Give the units of your answer.
[3 marks]**

(a)(ii) _____

(b) The total surface area of a cuboid can be found using the formula

$$S = 2A + 2B + 2C$$

where A is the area of the front,
 B is the area of the side and
 C is the area of the base.

Find S when $A = 10 \text{ cm}^2$, $B = 5 \text{ cm}^2$ and $C = 8 \text{ cm}^2$.
[2 marks]

(b) _____ cm^2

- 9 (a) A weekly bus pass costs £15.00.
The price is increased by 5%.

How much EXTRA will the bus pass cost after the increase?

Give your answer in pence.

[2 marks]

(a) _____ p

- (b) On one bus, 30 out of the 45 passengers have a bus pass.

What fraction of the passengers have a bus pass?

Give your fraction in its simplest form.

[2 marks]

(b) _____

10 Solve.

**(a) $4x - 3 = 17$
[2 marks]**

(a) _____

(b) $19 = 2x + 8$
[2 marks]

(b) _____

11 Two bags each contain five balls, numbered from 1 to 5.

In a game, Charlie takes a ball at random from each bag. He MULTIPLIES the numbers on the two balls to get his score.

**(a) Complete the table to show all the possible scores.
[2 marks]**

×	1	2	3	4	5
1					
2					10
3				12	
4					
5	5				

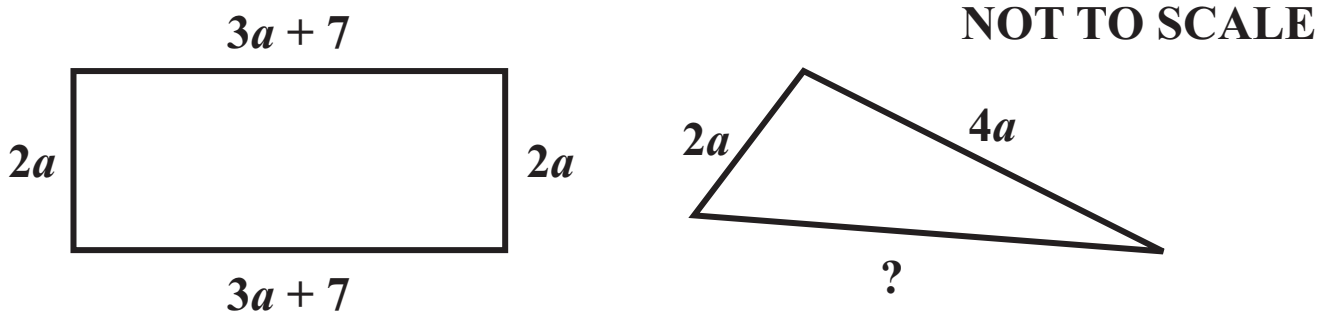
**(b) Find the probability that Charlie's score is 16.
[1 mark]**

(b) _____

(c) Find the probability that Charlie's score is **GREATER THAN 10**.
[2 marks]

(c) _____

12 The perimeter of this rectangle is equal to the perimeter of this triangle.



Find an expression for the missing length in the triangle.
[3 marks]

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