

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**

B273B

**MATHEMATICS C
(GRADUATED ASSESSMENT)**

MODULE M3 – SECTION B

TUESDAY 23 JUNE 2009: Morning

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)

Electronic calculator

READ INSTRUCTIONS OVERLEAF

INSTRUCTIONS TO CANDIDATES

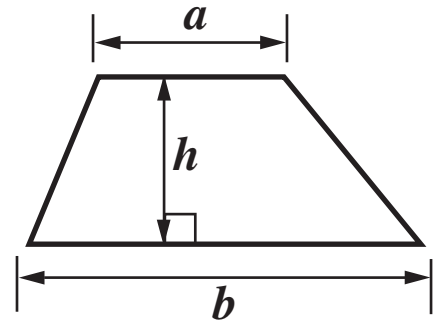
- **Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes on the first page.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully and make sure that you know what you have to do before starting your answer.**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

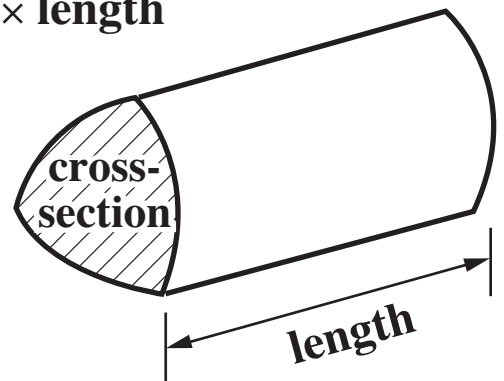
- **The number of marks is given in brackets [] at the end of each question or part question.**
- **Section B starts with question 6.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

Formulae Sheet

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



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



6 Work out.

(a) 17 squared

[1 mark]

(a) _____

(b) $\sqrt{729}$

[1 mark]

(b) _____

7 Megan points to a letter at random from this word.

M A T H E M A T I C S

What is the probability that she points to

(a) the letter E,

[1 mark]

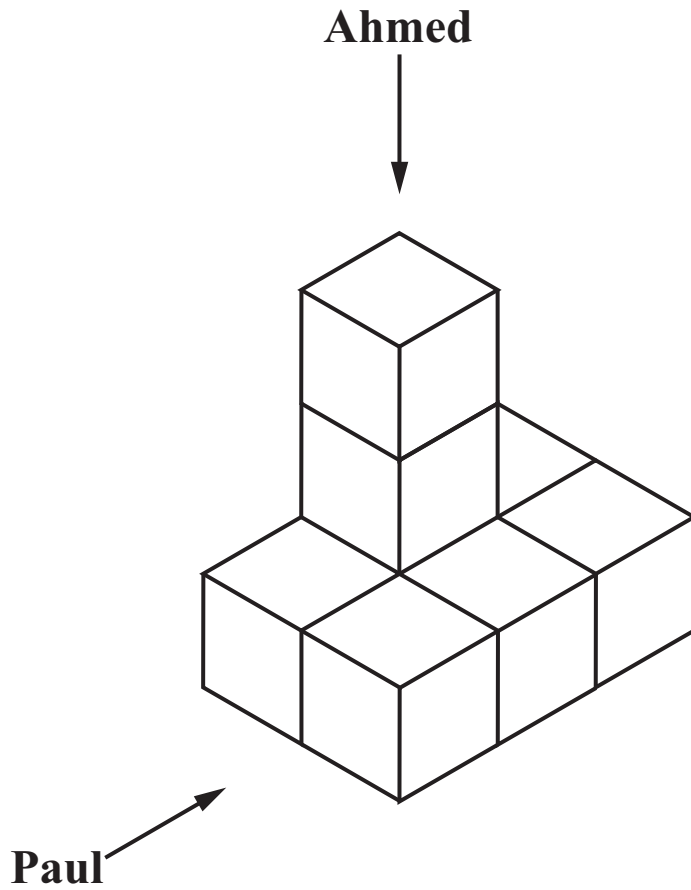
(a) _____

(b) the letter M?

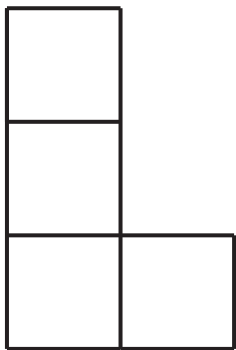
[1 mark]

(b) _____

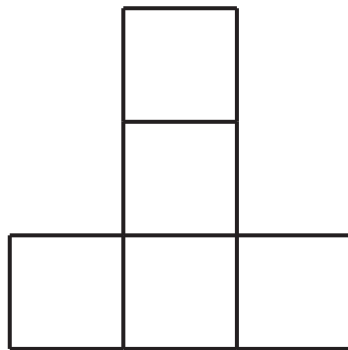
8 (a) Ahmed and Paul look at this model made from 8 cubes.



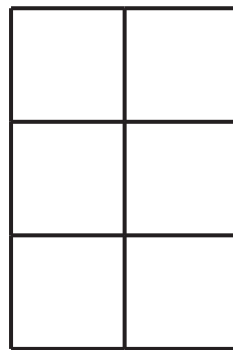
Here are four views of the model.



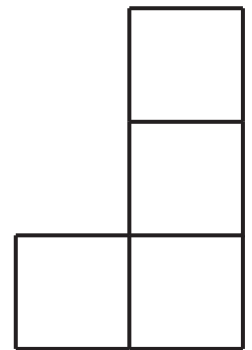
A



B



C



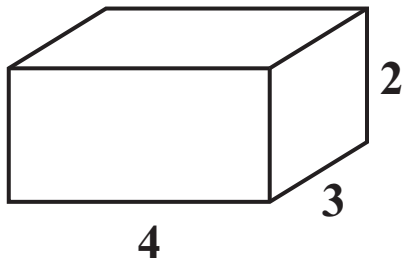
D

Complete these sentences.

Paul sees view _____
[1 mark]

Ahmed sees view _____
[1 mark]

**(b) A cuboid is 4 cm long, 3 cm high and 2 cm wide.
Make a full-size isometric drawing of the cuboid.**



[2 marks]

9 Solve.

(a) $x + 7 = 22$

[1 mark]

(a) _____

(b) $4x = 32$

[1 mark]

(b) _____

(c) $24 - x = 15$

[1 mark]

(c) _____

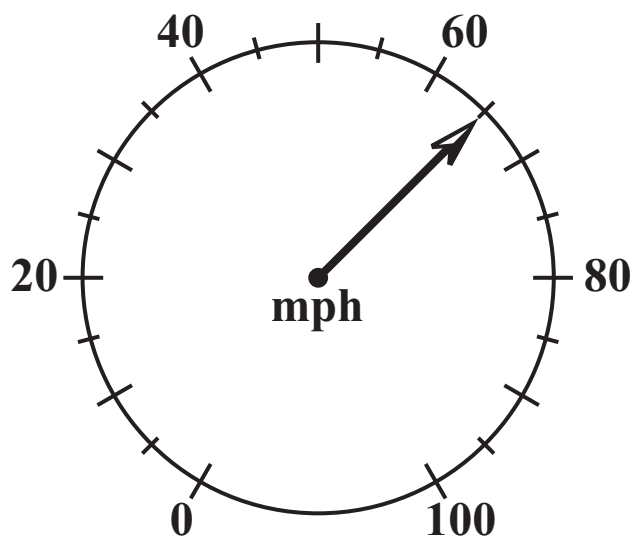
**10 Howard and his friends have a tin of biscuits.
It contains 42 biscuits.**

They eat $\frac{5}{6}$ of the biscuits.

How many biscuits do they eat?

[2 marks]

11 (a) This is the speedometer in Bill's car.



**What speed does it show?
[1 mark]**

(a) _____ mph

(b) Last week Bill made 10 journeys.

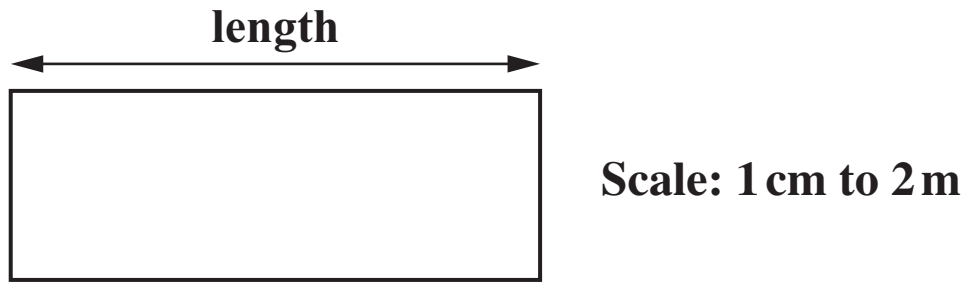
The distances of his journeys, in miles, are shown below.

14 45 68 7 29 34 57 21 11 42

**Calculate the mean distance of his journeys.
[3 marks]**

(b) _____ miles

(c) This is a scale drawing of the floor of Bill's garage.



What is the REAL length of the garage floor in metres?
[1 mark]

(c) _____ m

(d) Bill's handbook gives the length of his car as 4850 millimetres.

Write 4850 millimetres in metres.
[1 mark]

(d) _____ m

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12 Sean is planning a camping trip for himself and some friends.

(a) He uses this formula to work out how many litres of water he needs to take.

Multiply the number of people by 1.5 then add 6.

How many litres of water does he need to take for 18 people?

[2 marks]

(a) _____ litres

(b) Keith uses this formula to work out how many miles they will walk during the trip.

$$m = 3d + 5$$

m is the number of miles walked

d is the number of days

How many miles will they walk in 7 days?

[2 marks]

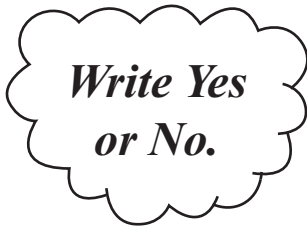
(b) _____ miles

- (c) Paul has a bottle of water containing 850 millilitres.
Lewis has a bottle containing $\frac{1}{4}$ of a litre.
Paul and Lewis decide to put their drinks together.

Will their drinks fit into a 1 litre bottle?

Explain your answer.

[2 marks]



_____ because _____



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