Candidate forename		Candidate surname	

Centre number						Candidate number				

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION

B273B

MATHEMATICS C

(GRADUATED ASSESSMENT)

MODULE M3 – SECTION B

TUESDAY 1 MARCH 2011: 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

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INSTRUCTIONS TO CANDIDATES

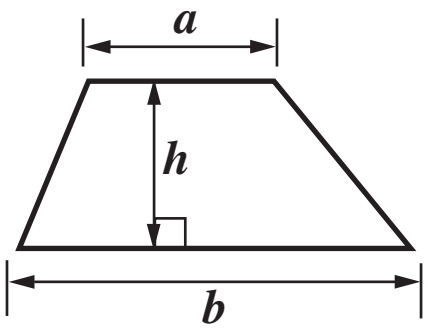
- **Write your name, centre number and candidate number in the boxes on the first page. Please write clearly and in capital letters.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Read each question carefully. Make sure you know what you have to do before starting your answer.**
- **Write your answer to each question in the space provided. Additional paper may be used if necessary but you must clearly show your candidate number, centre number and question number(s).**
- **Show your working. Marks may be given for a correct method even if the answer is incorrect.**
- **Answer ALL the questions.**

INFORMATION FOR CANDIDATES

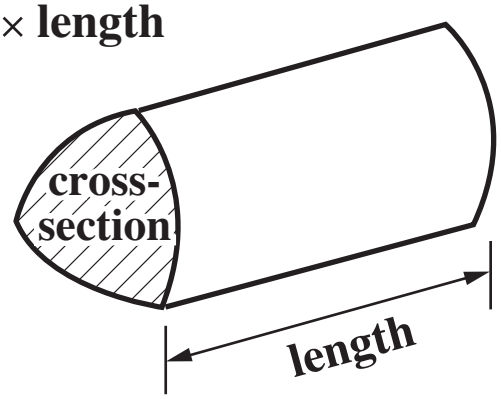
- **The number of marks is given in brackets [ ] at the end of each question or part question.**
- **Section B starts with question 9.**
- **You are expected to use a calculator in Section B of this paper.**
- **The total number of marks for this Section is 25.**

FORMULAE SHEET

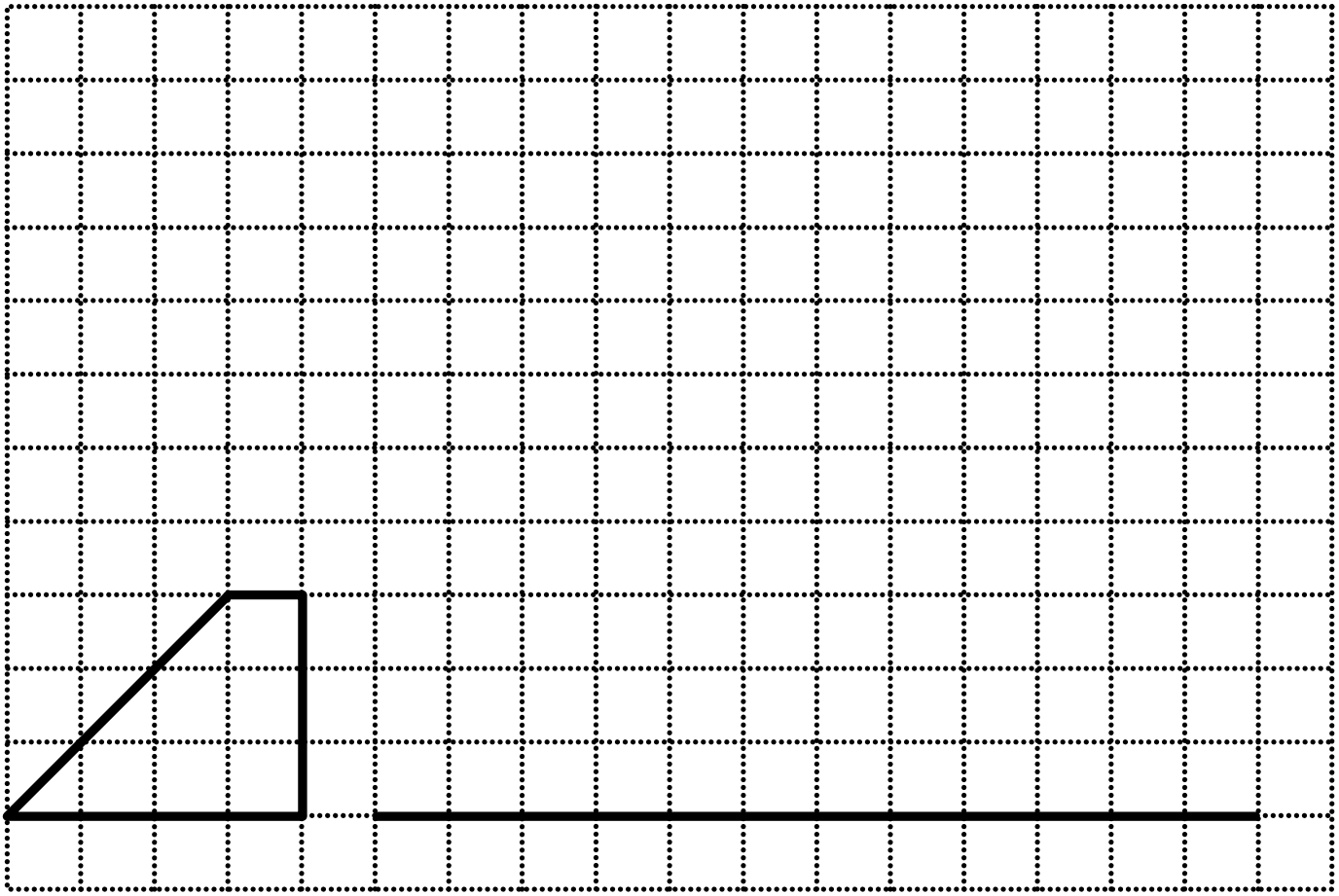
Area of trapezium $= \frac{1}{2}(a + b)h$



Volume of prism = (area of cross-section) × length



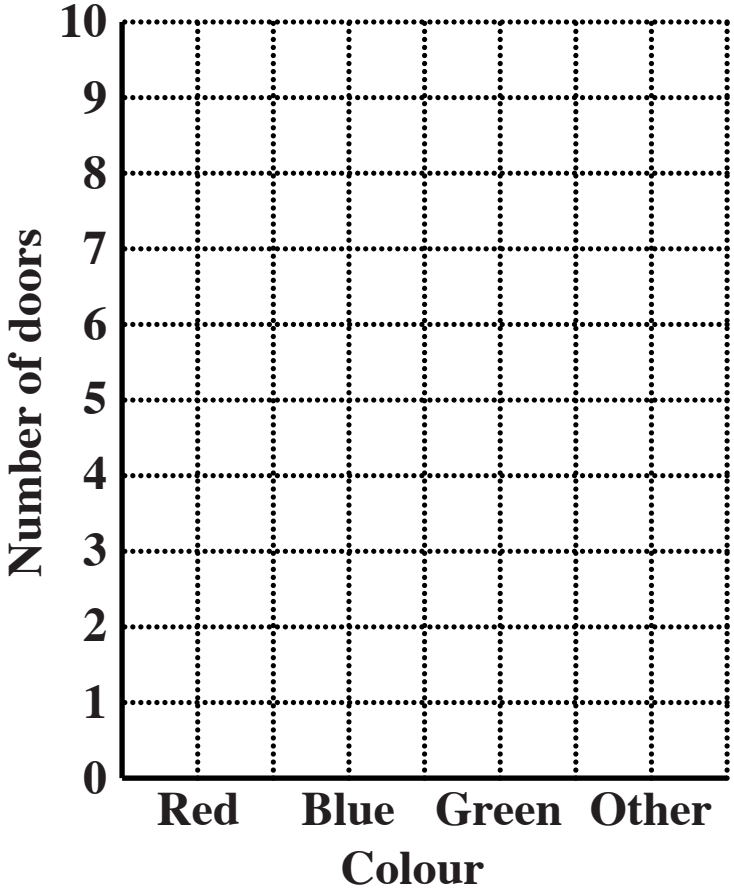
9 Enlarge this shape using scale factor 3.
One side has been drawn for you. [2 marks]



10 (a) Helen recorded the colours of the front doors of the 20 houses in her street.

Colour	Number of doors
Red	4
Blue	8
Green	5
Other	3

(i) Complete the bar chart to show this information. [2 marks]



(ii) Write down the mode. [1 mark]

(a)(ii) _____

(iii) Helen says that most of the doors are blue.

Explain why her statement is NOT correct.
[1 mark]

_____

_____

(b) During the half-term holiday Helen records the hours of sunshine each day.

4 0 1 9 8 7 2 8 6

(i) Calculate the mean. [3 marks]

(b)(i) _____hours

(ii) Work out the range. [1 mark]

(ii) _____hours

11 Work out.

(a) 24^2
[1 mark]

(a) _____

(b) $\sqrt{729}$
[1 mark]

(b) _____

(c) $(4 + 7) \times 6$
[1 mark]

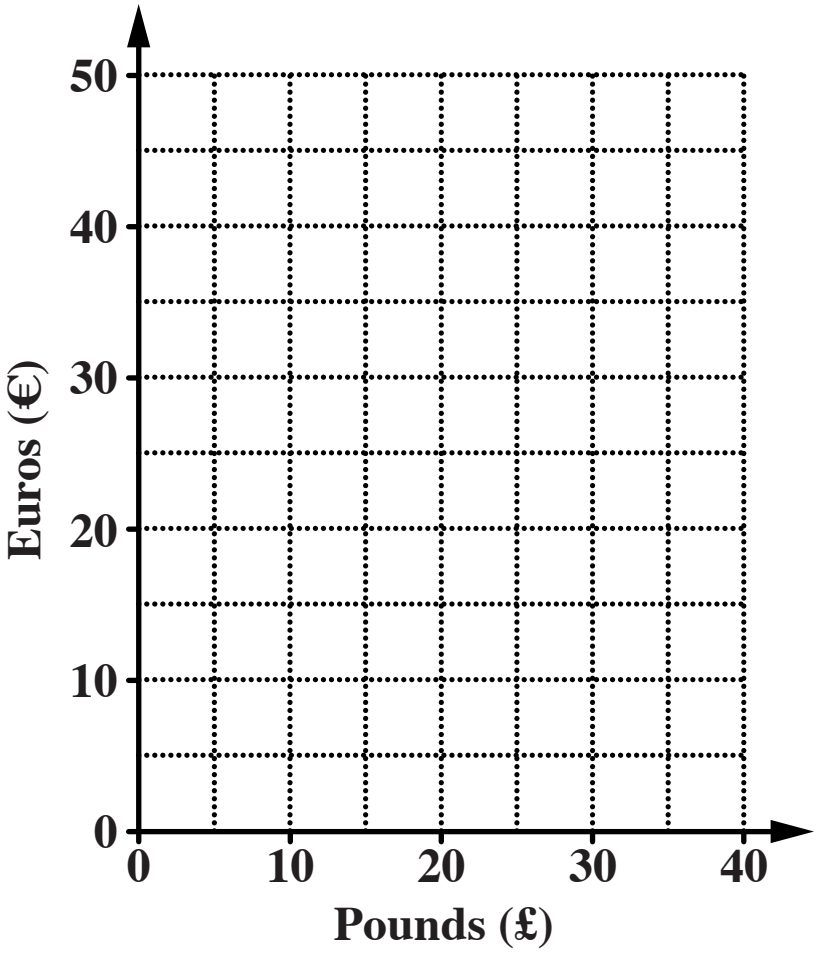
(c) _____

(d) $4 + 7 \times 6$
[1 mark]

(d) _____

12 Here is a table with conversions between pounds and euros.

Pounds (£)	0	20	40
Euros (€)	0	24	48



(a) Draw the conversion graph between pounds and euros.
[2 marks]

(b) Use your graph to convert

(i) 25 pounds to euros,
[1 mark]

(b)(i) € _____

(ii) 40 euros to pounds.
[1 mark]

(ii) £ _____

13 (a) Michelle is cooking beef.
She uses this rule to find the cooking time in minutes.

Multiply the weight (in kg) by 40 and add 40 to the answer.

Calculate the cooking time for a piece of beef weighing 3 kg. [2 marks]

(a) _____ minutes

(b) Geoff is cooking lamb.
He uses this rule to find the cooking time, T minutes.

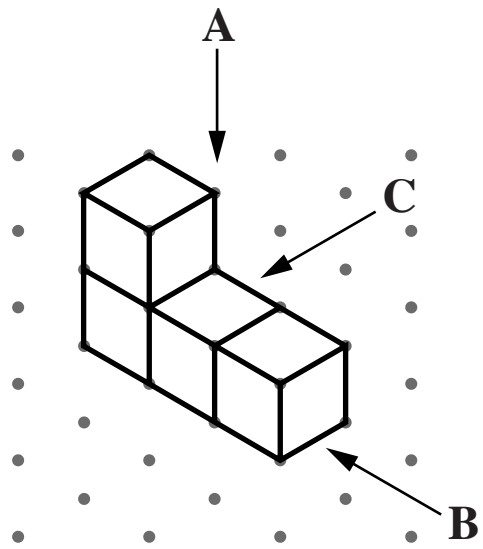
$$T = 50w + 55$$

w is the weight of the lamb in kilograms.

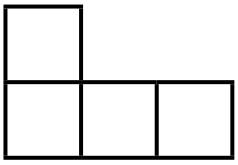
Calculate the cooking time when $w = 4$. [2 marks]

(b) _____ minutes

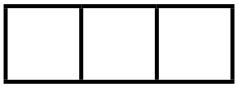
14 The shape below is made from 4 one-centimetre cubes.



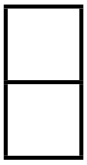
Here are four views.



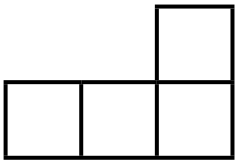
View 1



View 2



View 3



View 4

(a) Which is the view from A? [1 mark]

(a) _____

(b) Which is the view from B? [1 mark]

(b) _____

(c) Which is the view from C? [1 mark]

(c) _____

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