



**M1**

**GENERAL CERTIFICATE OF SECONDARY EDUCATION  
MATHEMATICS C (GRADUATED ASSESSMENT)  
MODULE M1 – SECTION A**

**B271A**

Candidates answer on the question paper.

**OCR supplied materials:**  
None

**Other materials required:**

- Geometrical instruments
- Tracing paper (optional)

**Tuesday 21 June 2011  
Afternoon**

**Duration: 30 minutes**



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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**INSTRUCTIONS TO CANDIDATES**

- Write your name, centre number and candidate number in the boxes above. 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.
- Do **not** write in the bar codes.

**INFORMATION FOR CANDIDATES**

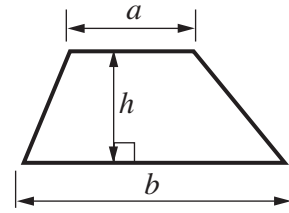
- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **12** pages. Any blank pages are indicated.

**WARNING**

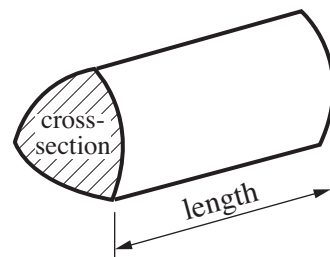
No calculator can be used for Section A of this paper

## Formulae Sheet

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



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



**PLEASE DO NOT WRITE ON THIS PAGE**

1 Work out.

(a)  $43 + 21 + 8$

(a) .....[1]

(b)  $48 - 25$

(b) .....[1]

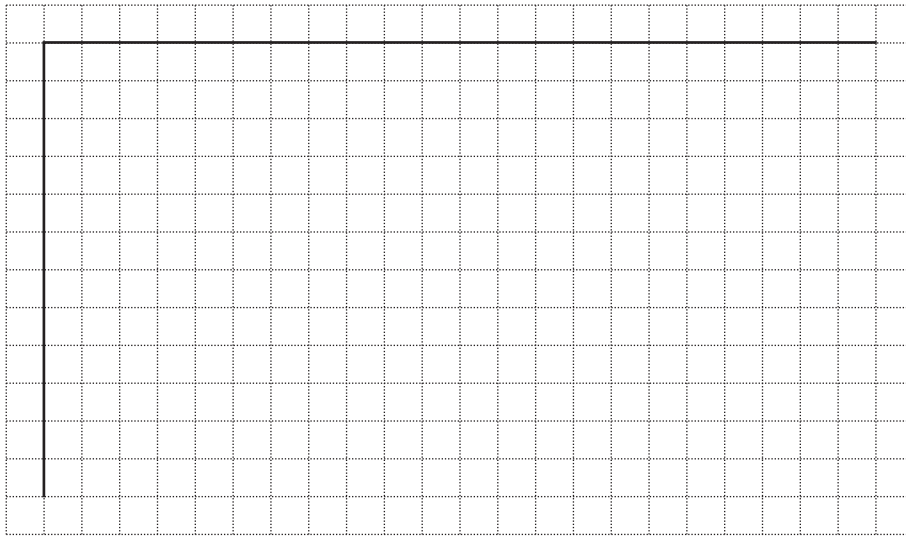
(c)  $8 \times 6$

(c) .....[1]

(d)  $24 \div 3$

(d) .....[1]

2 Colleen has drawn these two sides of a rectangle.



(a) Complete Colleen's rectangle. [1]

(b) Measure the length and the width of the rectangle.

(b) Length ..... cm [1]

Width ..... cm [1]

(c) Work out the perimeter of the rectangle.

(c) ..... cm [2]

- 3 Aaron and Karen are playing a game called **FIZZ BUZZ**.  
They turn over a card.  
Aaron calls out **FIZZ** when the number is in the five times table.  
Karen calls out **BUZZ** when the number is in the two times table.

These cards have been turned over.

- (a) Write F under the cards where **FIZZ** is called out.  
Write B under the cards where **BUZZ** is called out.

15

.....

12

.....

22

.....

25

.....

[2]

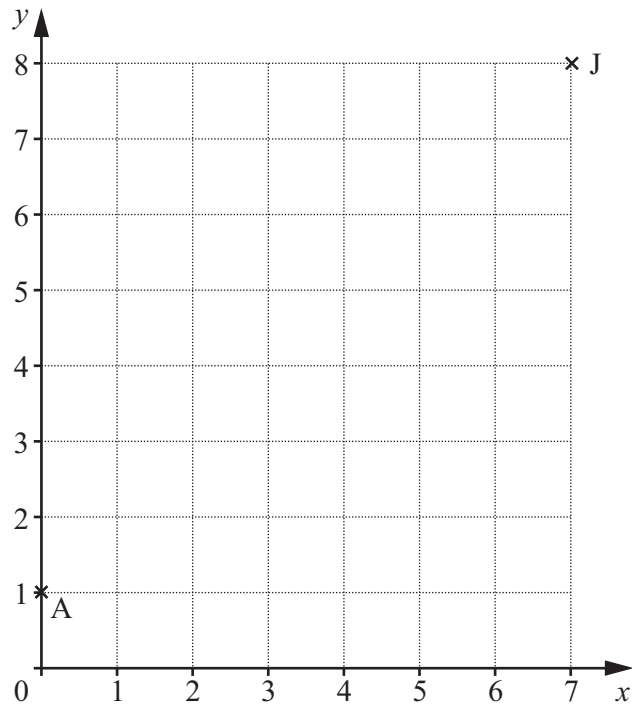
- (b) A new card is turned over and **both** Aaron and Karen call out.

?

Write down a number that could be on the card.

(b) ..... [2]

- 4 This grid has the points A(0, 1) and J(7, 8) plotted on it.



- (a) (i) Draw a straight line joining point A to point J.

Mark another point on your line.  
Label it P.

[1]

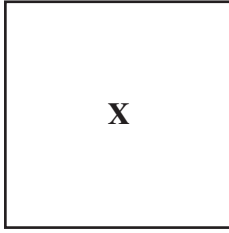
- (ii) Write down the coordinates of point P.

(a)(ii) P (..... , .....) [1]

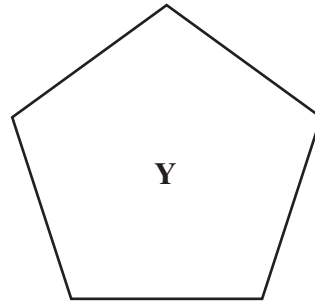
- (b) Plot the point (5, 2).  
Label it G.

[1]

- 5 (a) Write the correct mathematical name under each of these **regular** shapes.



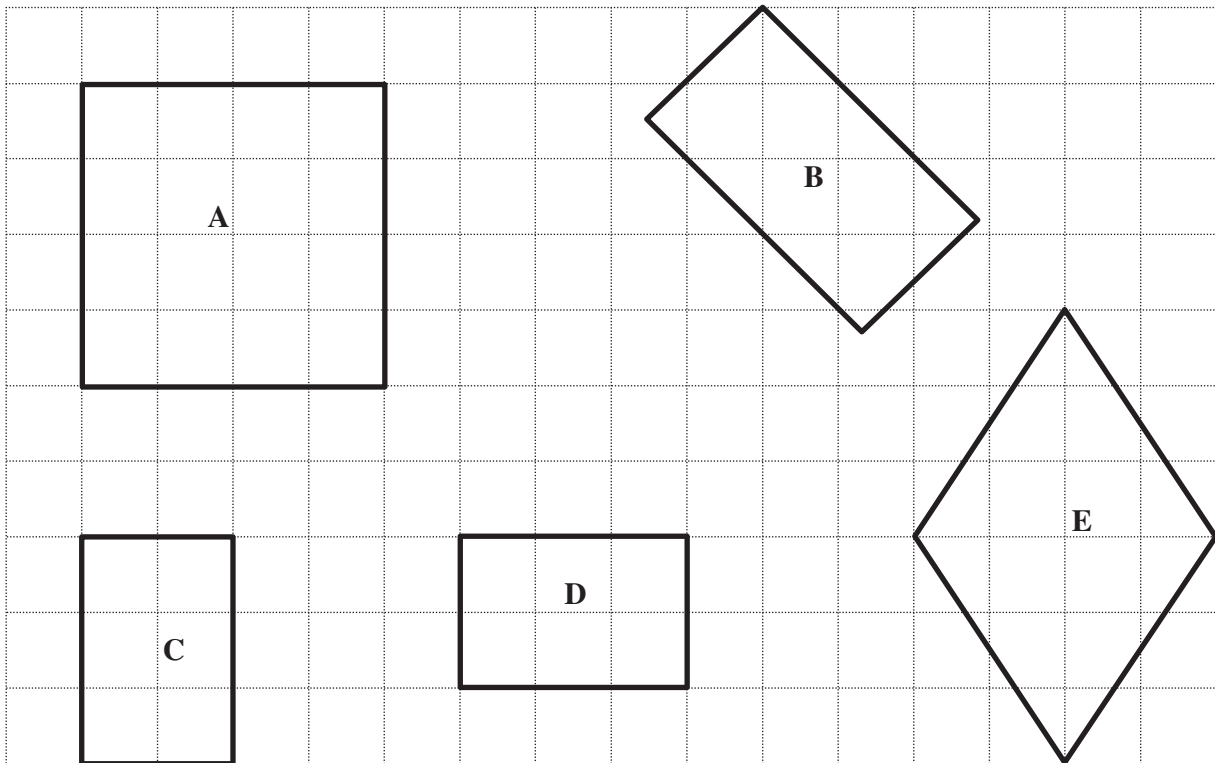
.....



.....

[2]

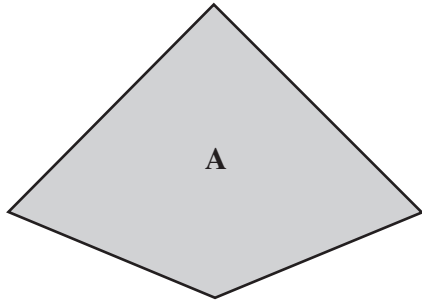
- (b) Which of these shapes is an enlargement of shape X in part (a)?



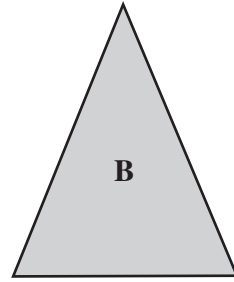
(b) ..... [1]

6 A construction kit contains some of these shapes.

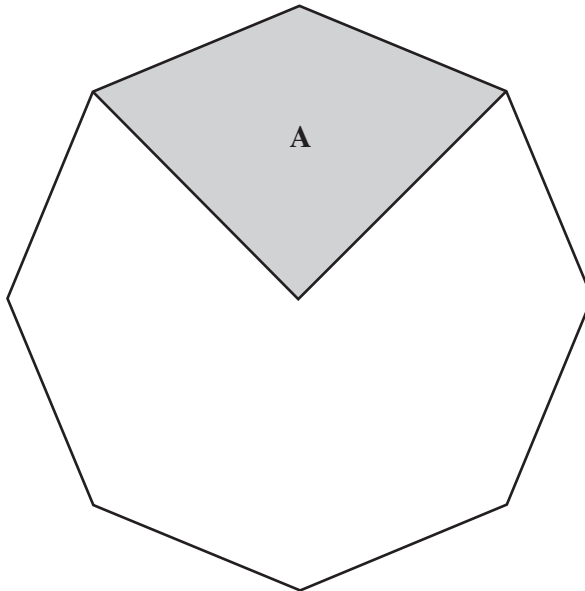
A shape



B shape



(a) What fraction of the octagon is one A shape?

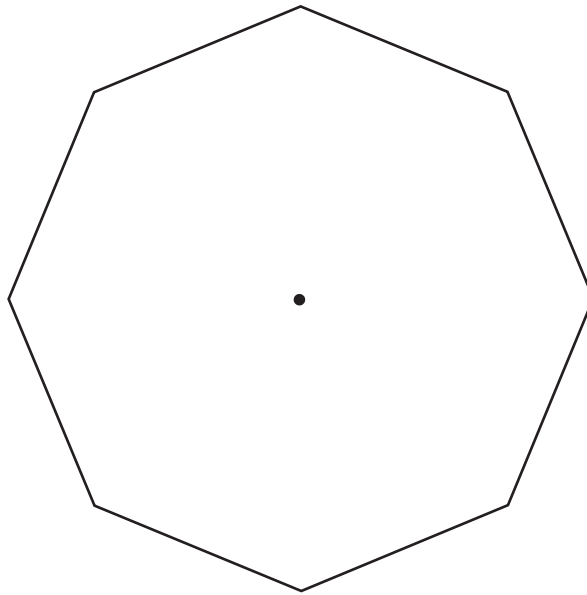


(a) ..... [1]



(b) (i) A regular octagon is made using **both A shapes and B shapes**.

Use the diagram to show one way this can be done.



[1]

(ii) What fraction of your octagon is made of **A shapes**?

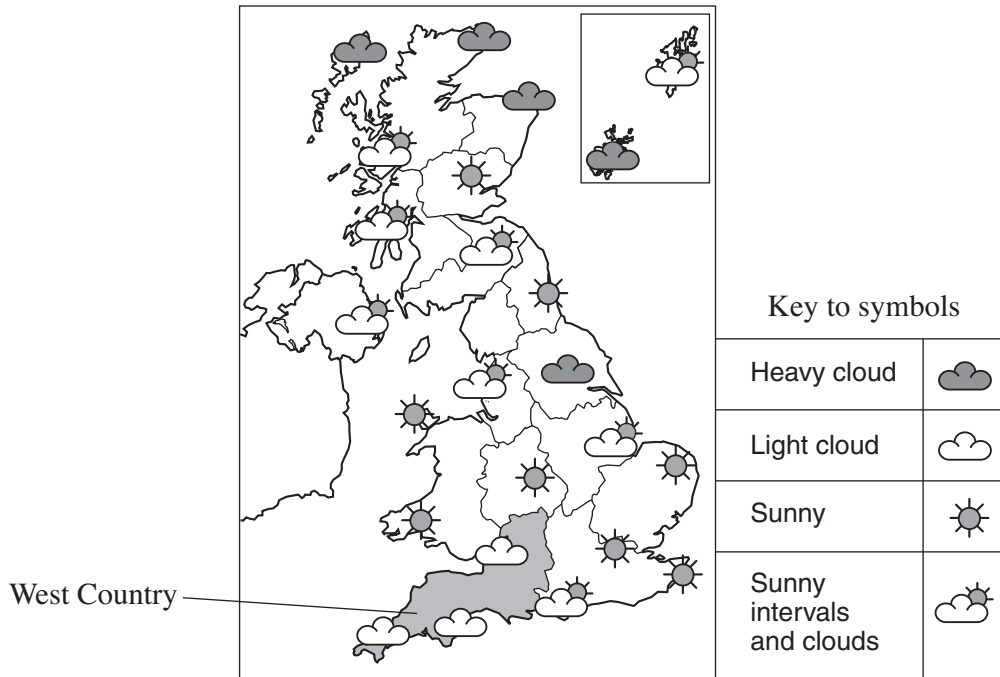
(b)(ii) ..... [1]

(iii) What fraction of your octagon is made of **B shapes**?

(iii) ..... [1]

**TURN OVER FOR QUESTION 7**

- 7 Here is a weather map for the UK.  
It shows the weather forecast for 9am on Tuesday.



- (a) Choose the best word from this list to complete the sentence below.

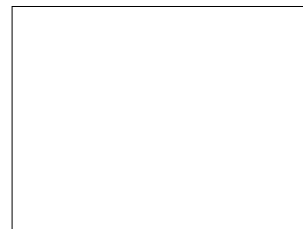
certain
likely
evens
unlikely
impossible

It is ..... that there will be **some** sun in the  
West Country at 9am on Tuesday.

[1]

- (b) The forecasters think that there will be no cloud over the West Country on Friday.

Draw, in the box, the symbol they should put on the weather map to show this.



[1]

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