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OCR
RECOGNISING ACHIEVEMENT

M4

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT) B274A
MODULE M4 – SECTION A

Candidates answer on the question paper.

OCR supplied materials:
None

Other materials required:
- Geometrical instruments
- Tracing paper (optional)

Tuesday 1 March 2011
Morning

Duration: 30 minutes

Candidate forename		Candidate surname	

Centre number						Candidate number				

MODIFIED LANGUAGE

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

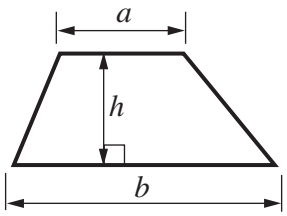
- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **12** pages. Any blank pages are indicated.

WARNING

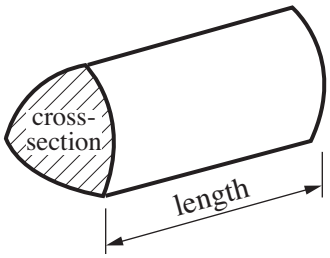
No calculator can be used for Section A of this paper

Formulae Sheet

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



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



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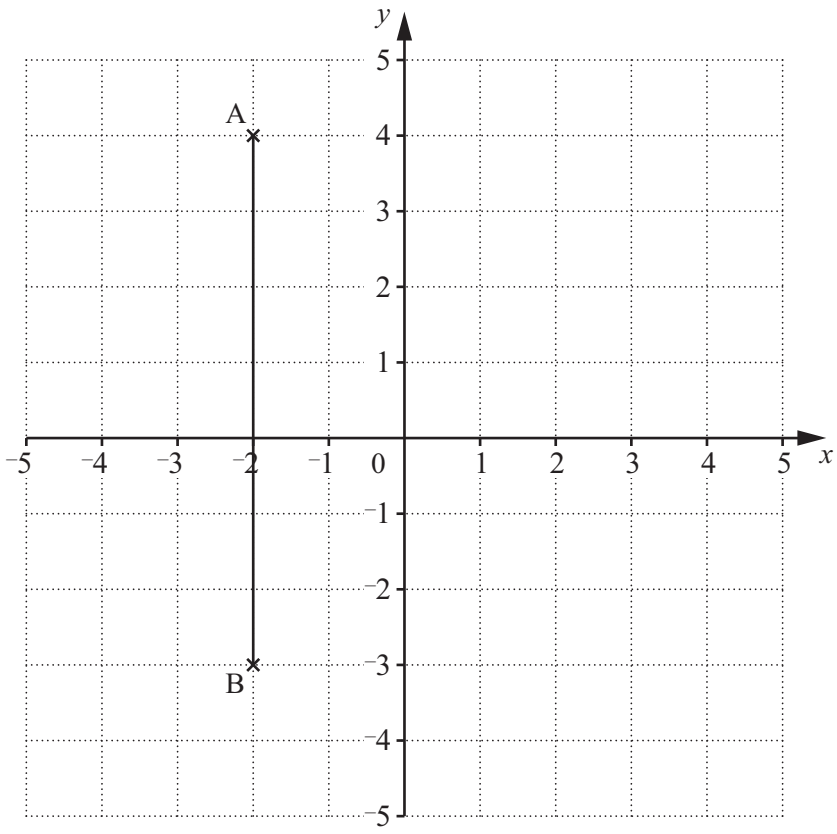
1 Here is a one-centimetre grid.



(a) Write down the coordinates of point A.

(a) (..... , ...) **[1]**

(b) Point C is on a line through B, parallel to the *x*-axis.
BC = 5 cm.

Mark point C and write down its coordinates.

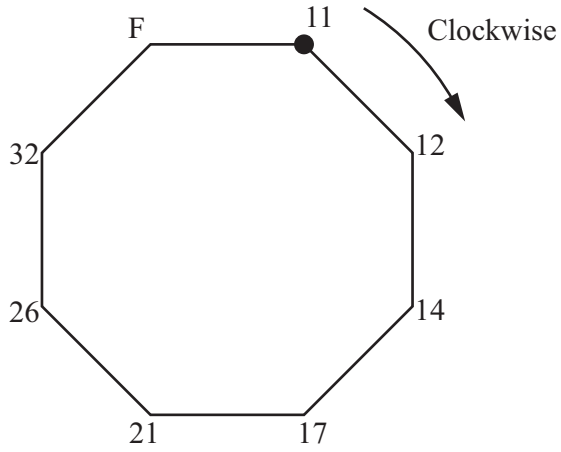
(b) (..... , ...) **[2]**

(c) A, B and C are three of the corners of a rectangle.

Draw the rectangle and find its area.

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

2 The corners of this octagon are numbered, **clockwise**, starting with 11 at ●.



(a) What is the rule for numbering each new corner?

..... **[1]**

(b) What number should be written at corner F?

(b) ..... **[1]**

(c) Write down one prime number from the numbers at the corners of the octagon.

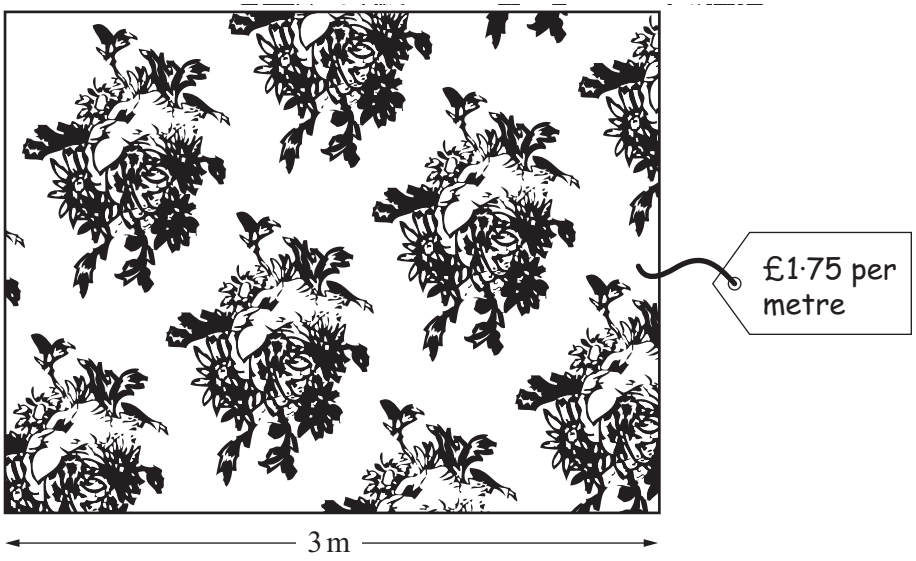
(c) ..... **[1]**

(d) What is the rule for numbering the corners if you **start** at corner F and go **anticlockwise**?

..... **[1]**

3 Orla works in a shop selling fabric.
One of her jobs is to measure and price the leftover pieces of fabric from ends of rolls.

(a) This is one leftover piece that is 3 m long.



What is the cost of this leftover piece of fabric?

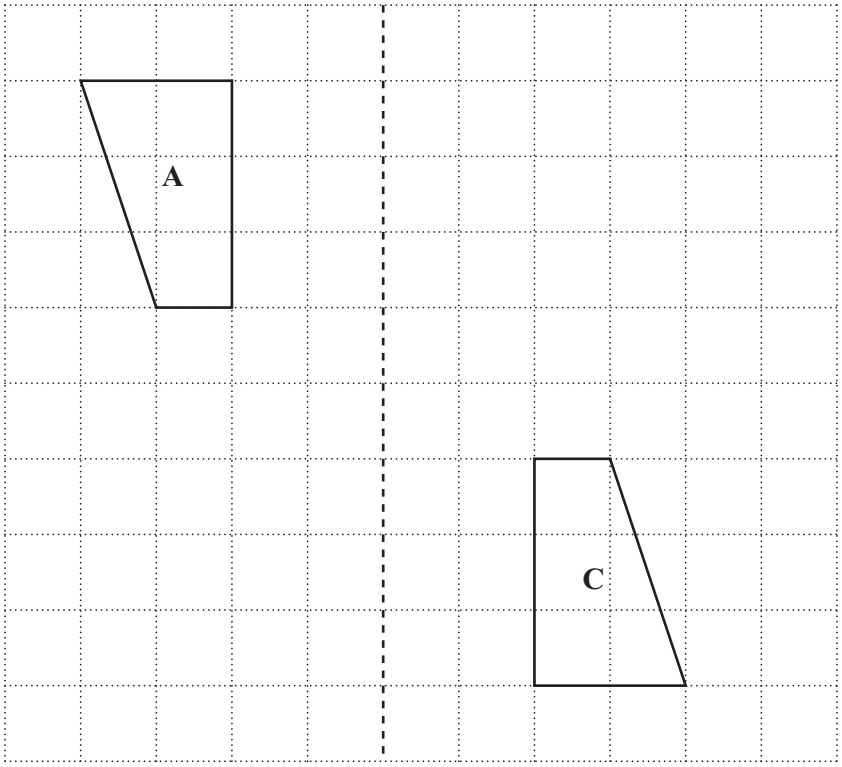
(a) £ ..... **[3]**

(b) Orla has three leftover pieces that are 1·75 m, 2·5 m, and 3 m long.

What is the total length of these leftover pieces?

(b) ..... m **[2]**

4

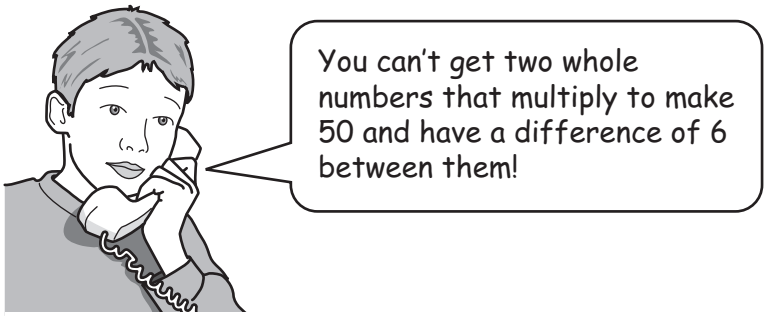


(a) Draw the reflection of shape **A** in the mirror line.
Label the image **B**. **[2]**

(b) Shape **B** can be reflected onto shape **C** using another mirror line.

Draw this mirror line on the grid. **[1]**

5 Brian says:

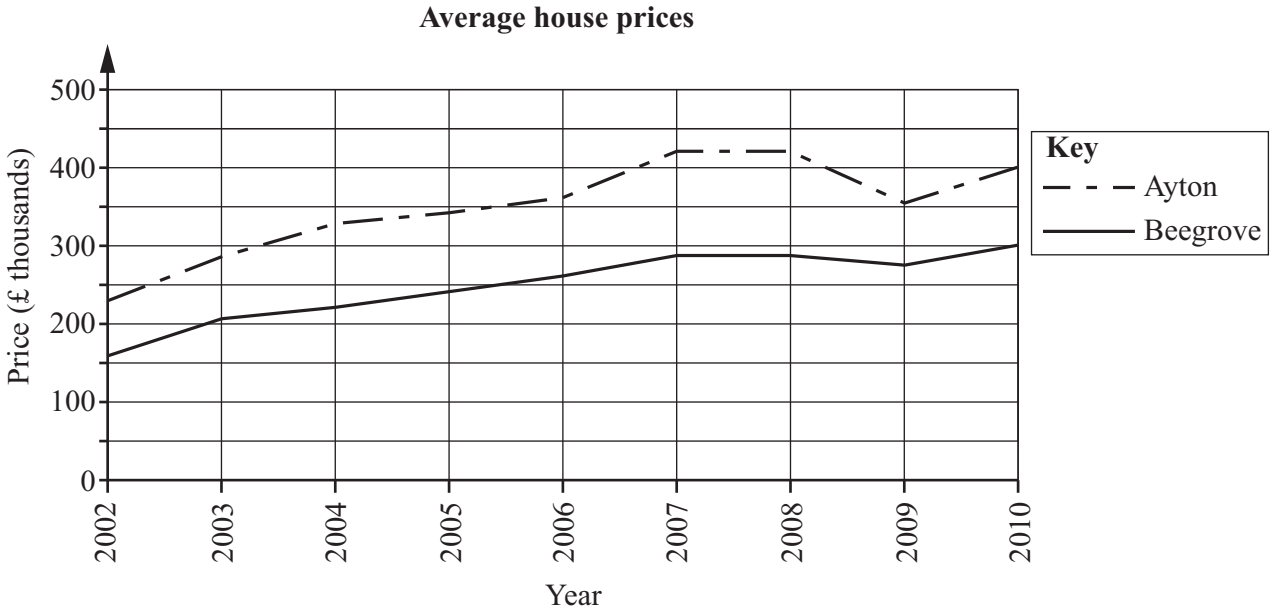


Is Brian right to say this?
Show how you decide.

Write Yes or No.

.....**[3]**

6 Sam is doing a project on house prices.
He draws this graph on his computer, showing average house prices in two towns.



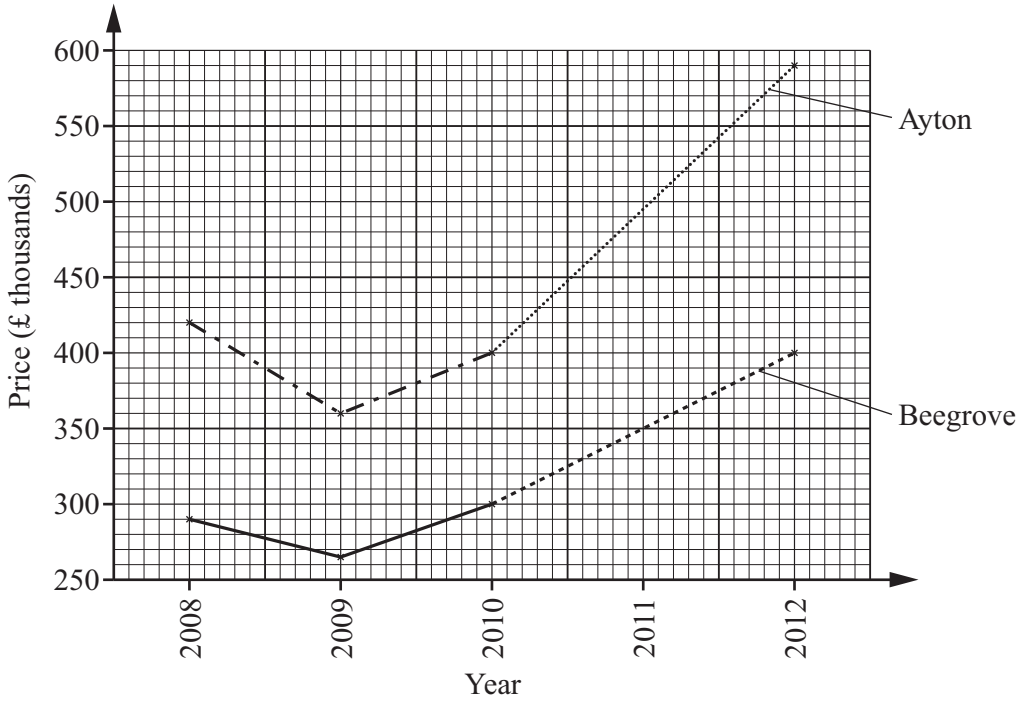
(a) (i) In 2002, roughly how much **more** expensive were houses in Ayton than Beegrove?

(a)(i) £.....thousands **[1]**

(ii) Give one reason why you cannot use the graph to give an exact answer to part **(a)(i)**.

.....**[1]**

(b) Sam plots average prices for the last three years on graph paper.
He also shows what he expects the prices to be in 2011 and 2012.



Write down one reason why this graph might not represent the changes that will happen to house prices in the two towns.

.....

..... **[1]**

TURN OVER FOR QUESTION 7

7 This table shows information about Wheat Flakes.

	100 g of Wheat Flakes	Average serving 25 g
Energy	400 Kcal	
Sugars	8 g	2 g
Fat	1 g	0·25 g
Saturated fat	0·2 g	0·05 g
Salt		0·5 g
Fibre	4 g	1 g

Complete the table. **[2]**

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