



M5

**GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M5 (SECTION A)**

B275A

Candidates answer on the question paper.

OCR supplied materials:
None

Other materials required:

- Geometrical instruments
- Tracing paper (optional)
- Pie chart scale (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.
- Show your working. Marks may be given for a correct method even if the answer is incorrect.
- 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).
- Answer **all** the questions.
- Do **not** write in the bar codes.

INFORMATION FOR CANDIDATES

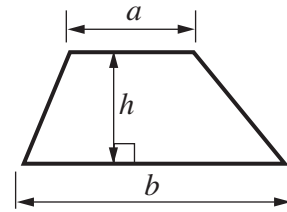
- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

WARNING

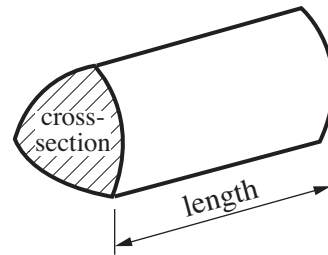
No calculator can be used for Section A of this paper

Formulae Sheet

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



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



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- 1 (a) A football stadium seats 49 017 people.

How many people is this, correct to 1 significant figure?

(a) [1]

- (b) One day, the football club supporters' shop sold £3497.52 of goods.

How much is this, correct to the nearest hundred pounds?

(b) £ [1]

- (c) For one match, 28 937 tickets were sold at £22 each.

Estimate the total amount of money for these ticket sales.
Show the estimates you use.

(c) × = £ [2]

2 (a) (i) Which two of the fractions in this list are equivalent?

$$\frac{3}{4}$$

$$\frac{5}{8}$$

$$\frac{24}{40}$$

$$\frac{7}{10}$$

$$\frac{15}{24}$$

(a)(i) and [2]

(ii) Work out.

$$5 \times \frac{2}{7}$$

Give your answer as a mixed number.

(ii)..... [2]

(b) Work out.

$$3^4$$

(b) [2]

3 Solve.

(a) $x + 7 = 5$

(a) [1]

(b) $9 = 4x + 3$

(b) [2]

4 Jenny has two fair ordinary dice numbered from 1 to 6. She throws them and adds the numbers shown to get the total.

(a) Complete this table to show the possible totals.

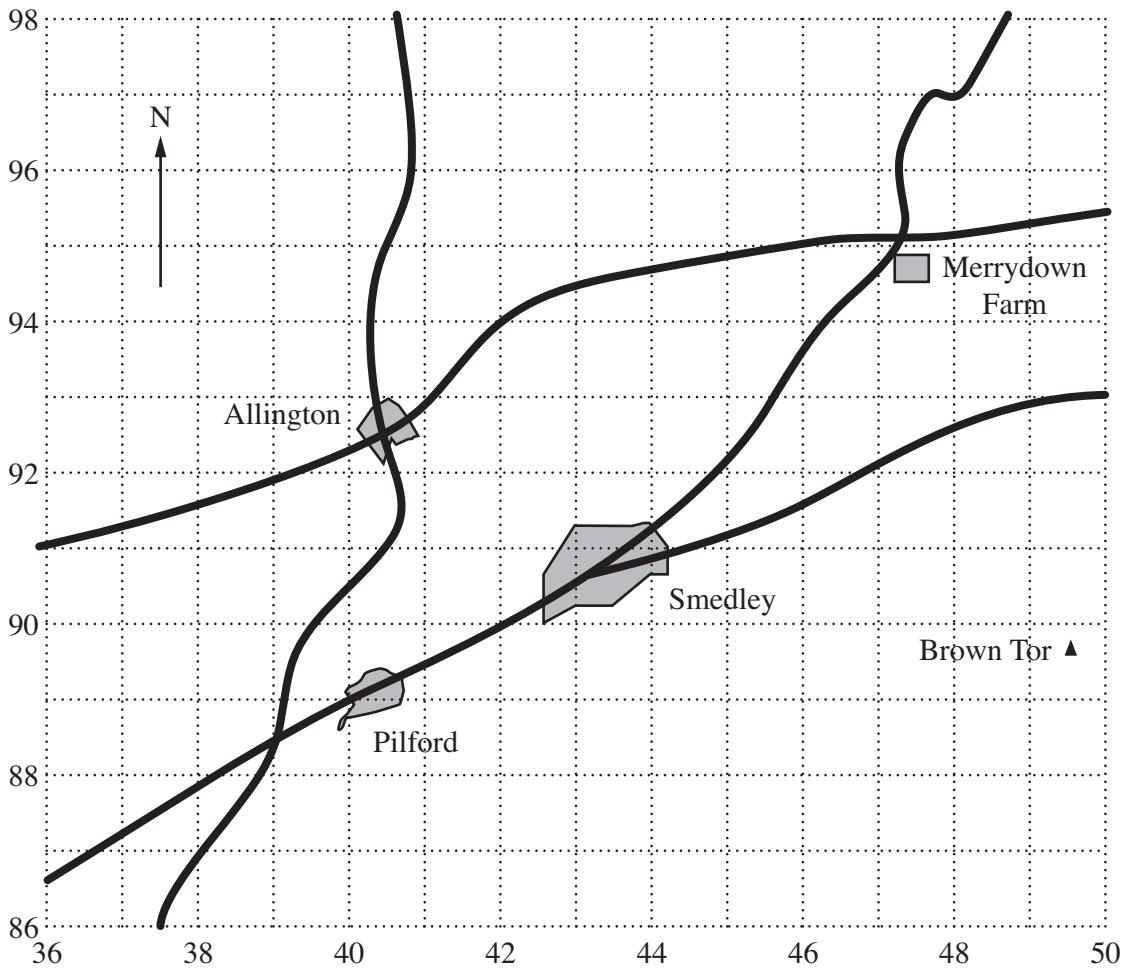
		First dice					
		+	1	2	3	4	5
Second dice	1	2	3	4	5	6	7
	2	3	4	5	6		
	3	4	5	6	7		
	4	5	6	7	8		
	5						
	6						

[1]

(b) What is the probability that Jenny obtains a total of 7 when she throws the two dice?

(b) [2]

5



Scale: 1 cm represents 1 km

(a) What is the name of the village which has four-figure grid reference 4092?

(a) [1]

(b) Matthew works at Merrydown Farm.

(i) What is the four-figure grid reference for Merrydown Farm?

(b)(i) [1]

(ii) Matthew lives at Pilford.

Estimate how far Matthew travels to work at Merrydown Farm.

(ii) km [1]

(c) Measure the bearing of Brown Tor (▲) from the crossroads by Merrydown Farm.

(c).....° [1]

- 6 Using ruler and compasses only, construct an equilateral triangle with side 6.5 cm.
Leave in your construction lines.
One side of the triangle has been drawn for you.



[2]

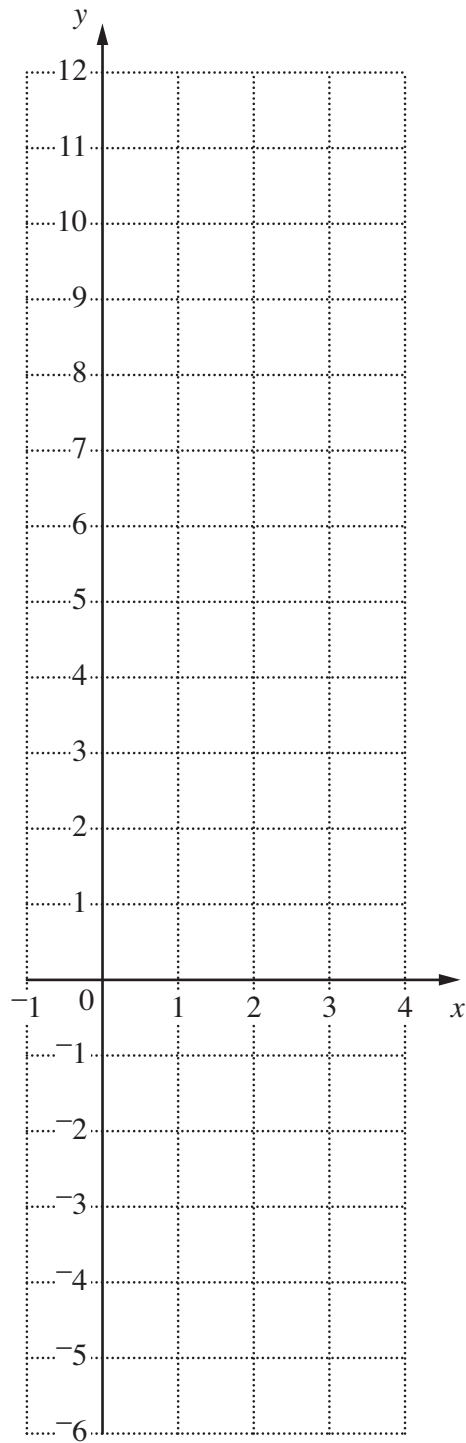
TURN OVER FOR QUESTION 7

7 (a) Complete this table for $y = 3x - 2$.

x	-1	0	1	2	3	4
y			1	4	7	

[1]

(b) Draw the graph of $y = 3x - 2$ for values of x from -1 to 4.



[2]