

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

**M4**

**TUESDAY 24 JUNE 2008**

Morning  
 Time: 30 minutes

Candidates answer on the question paper  
**Additional materials (enclosed):** None

**Additional materials (required):**  
 Geometrical instruments  
 Tracing paper (optional)



\* C U P / T 5 9 8 7 9 \*

Candidate Forename

Candidate Surname

Centre Number

Candidate Number

**INSTRUCTIONS TO CANDIDATES**

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use blue or 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.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided.

**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**.



**WARNING**

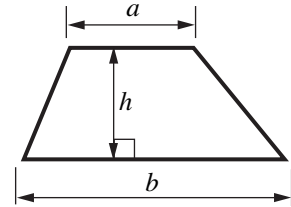
**You are not allowed to use a calculator in Section A of this paper.**

FOR EXAMINER'S USE	
SECTION A	
SECTION B	
TOTAL	

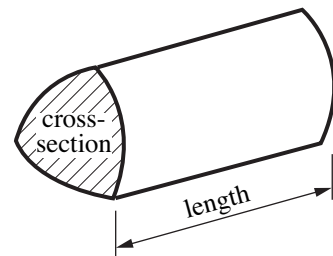
This document consists of **10** printed pages and **2** blank pages.

## Formulae Sheet

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



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



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- 1 (a) Choose numbers from this list to complete these sentences.

8	12	14	25	29	36	42	48
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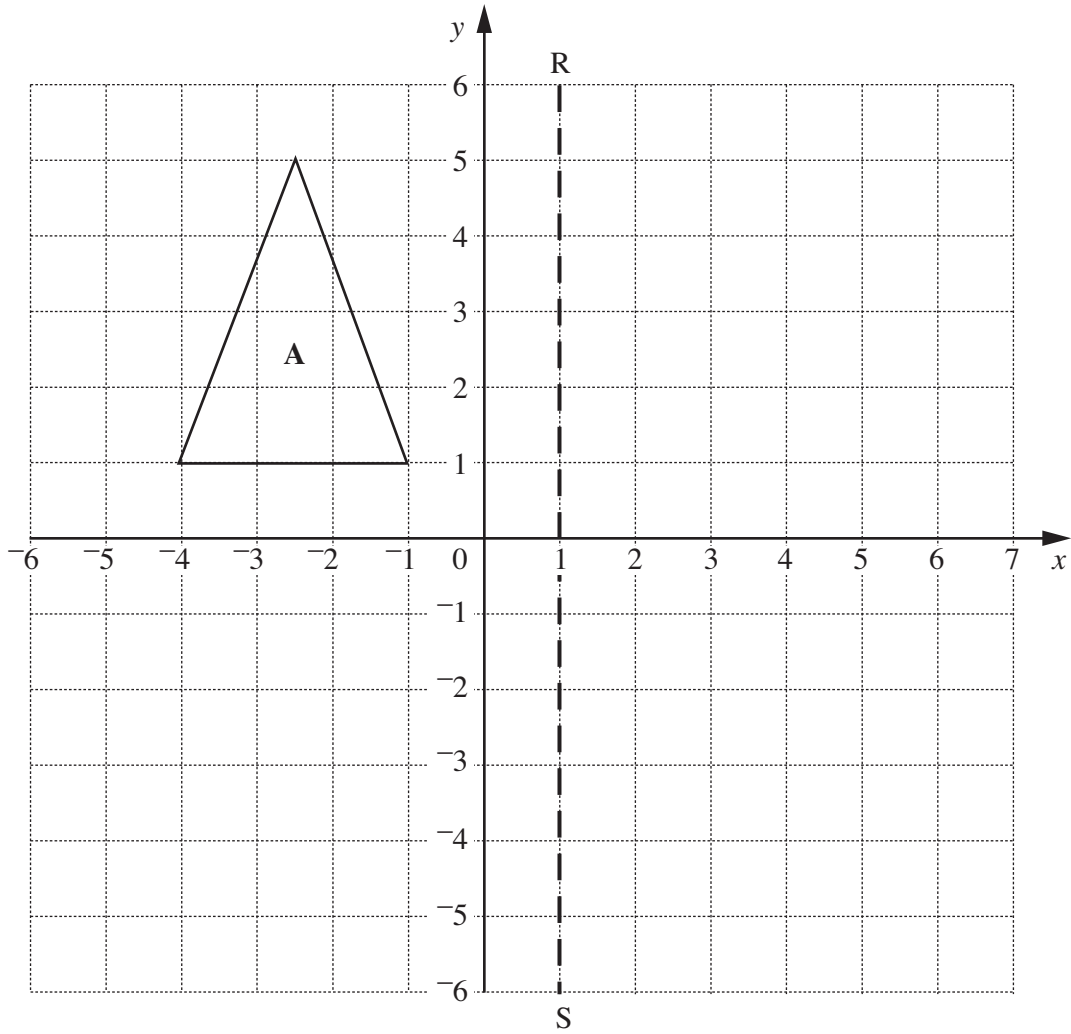
(i) ..... is a prime number. [1]

(ii) ..... is a common factor of 24 **and** 56. [1]

- (b) Put a circle round the **smallest** number in the list below.

0·41   0·412   0·14   0·041   0·401

[1]

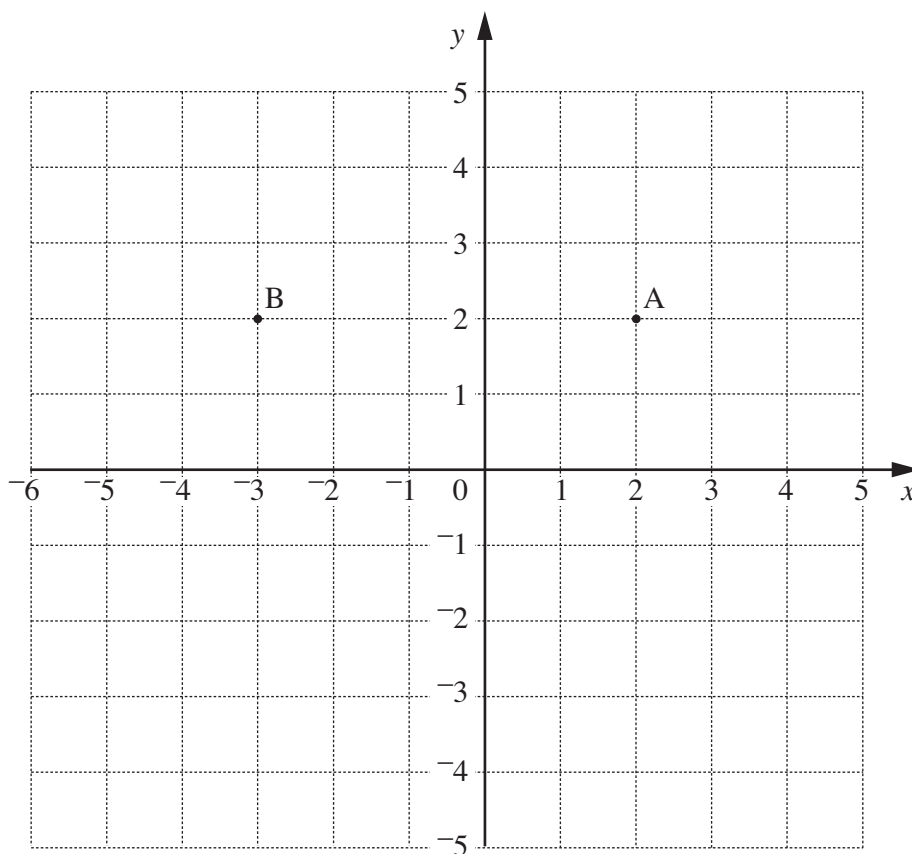


(a) Reflect triangle **A** in the line **RS**.  
Label the image **B**.

[1]

(b) Reflect triangle **A** in the  $x$ -axis.  
Label the image **C**.

[1]



- (a) Plot the point  $(-2, -1)$  and label it C. [1]
- (b) ABCD is a parallelogram.
- (i) Plot point D on the grid to complete the parallelogram. [1]
- (ii) Write down the coordinates of point D. (b)(ii) (..... , .....) [1]

- 4 (a) Rob's café sells food and drink.  
23% of the total sales on one day were bottles of water.

Write 23% as a fraction.

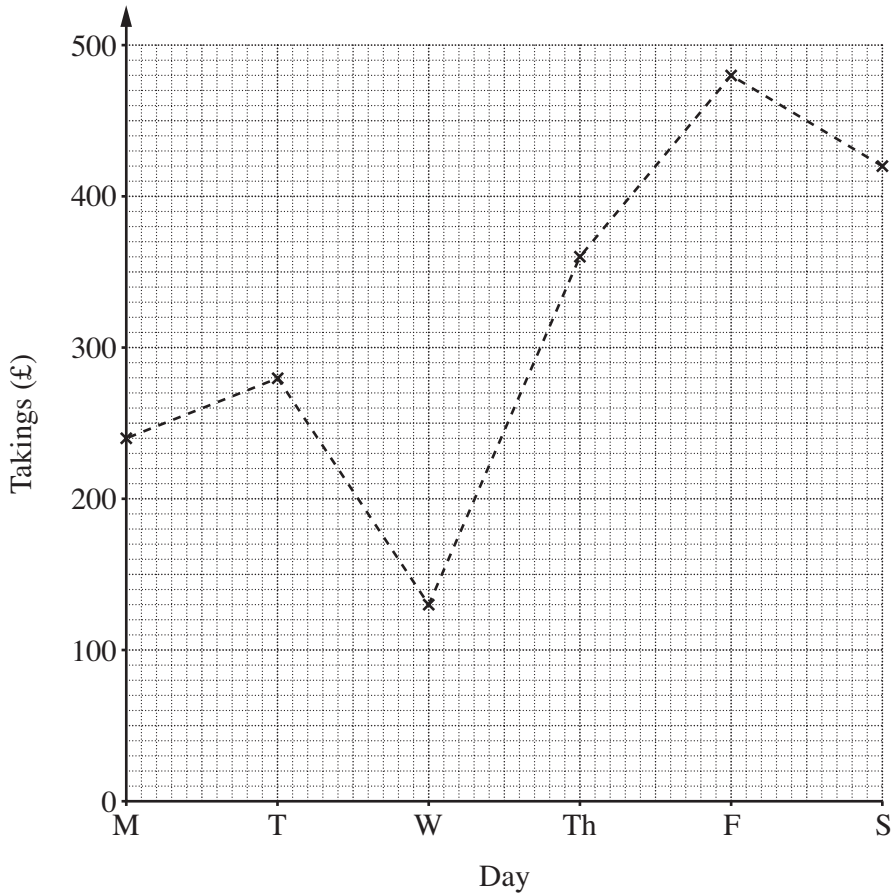
(a) ..... [1]

- (b) A cheeseburger weighs 208 g.  
 $\frac{1}{8}$  of the cheeseburger is protein.

Work out  $\frac{1}{8}$  of 208 g.

(b) ..... g [1]

- (c) This graph represents the takings at Rob's café one week.



- (i) Write down the greatest amount of takings and the day on which this occurred.

(c)(i) £ ..... on ..... [1]

- (ii) How much more did the café take on Tuesday than it did on Monday?

(ii) £ ..... [1]

- 5 The colours of the eight logs on a log flume ride are shown below.

<b>Red</b>	<b>Blue</b>	<b>Green</b>	<b>Yellow</b>
<b>Green</b>	<b>Blue</b>	<b>Blue</b>	<b>Red</b>

Katy rides in the next log to arrive.

What is the probability that the log she rides in is

- (a) Blue,

(a) ..... [1]

- (b) not Yellow,

(b) ..... [1]

- (c) Black?

(c) ..... [1]

- 6 Work out.

$$267 \times 28$$

**You must show all your working.**

..... [3]

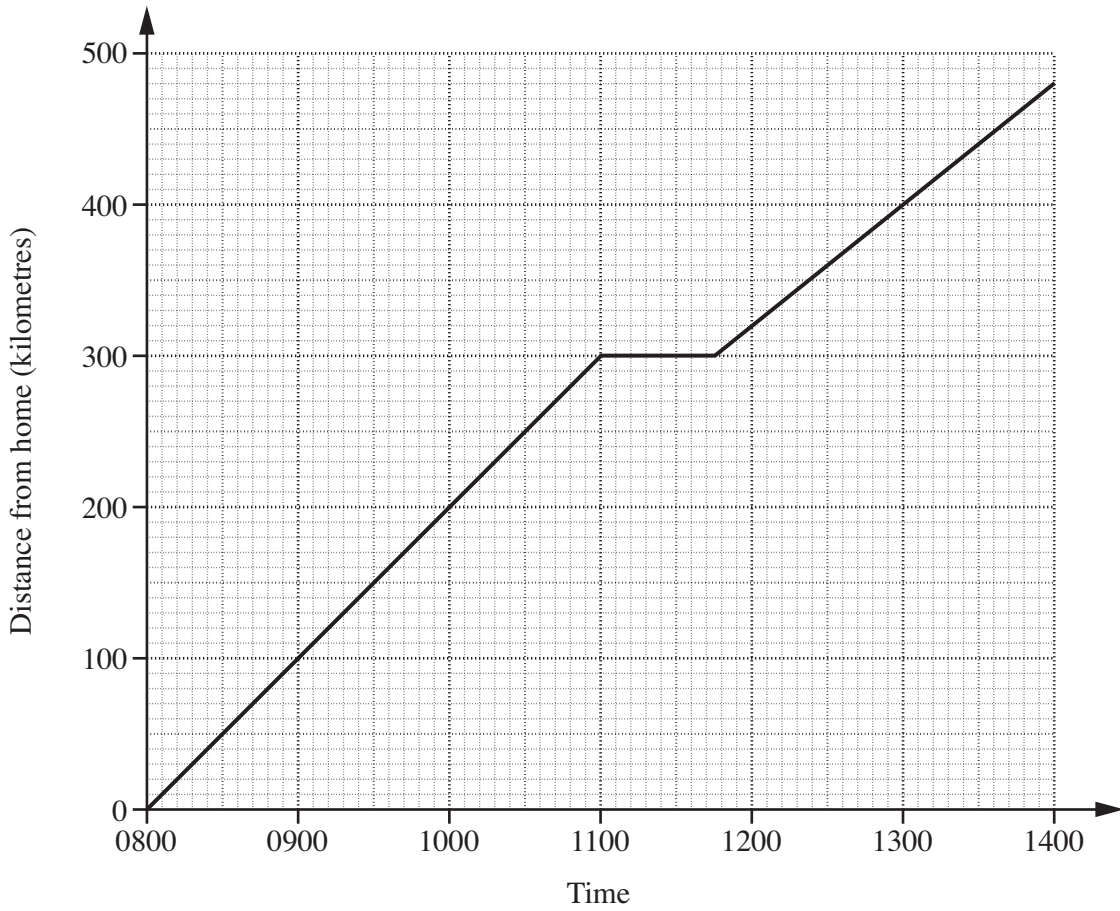
- 7 Sarah becomes a member of a DVD hire club.  
It costs £5 to become a member and £3 for each DVD hired.

Write an expression for the total cost, in pounds, of becoming a member and hiring  $n$  DVDs.

..... [2]



- 8 Ruth went on holiday by car from home to Padstow. The graph shows her journey.



Use the graph to answer these questions.

- (a) How far did she travel to Padstow? (a) ..... km [1]
- (b) Ruth stopped for a break during her journey.
- (i) At what time did she stop? (b)(i) ..... [1]
- (ii) For how long did she stop? (ii) ..... minutes [1]
- (c) Work out the speed for the first part of her journey. (c) ..... km/h [2]

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