

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

## B274A

Candidates answer on the Question Paper

**OCR Supplied Materials:**  
None

**Other Materials Required:**

- Geometrical instruments
- Tracing paper (optional)

**Monday 21 June 2010**  
**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 clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use 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. Additional paper may be used if necessary but you must clearly show your Candidate Number, Centre Number and question number(s).

**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.

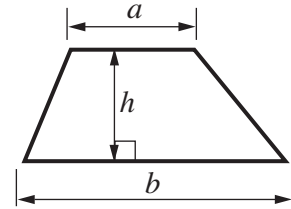
**WARNING**



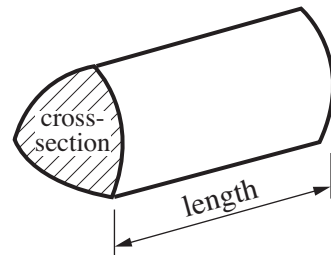
No calculator can be used for Section A of this paper

## Formulae Sheet

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



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



**PLEASE DO NOT WRITE ON THIS PAGE**

1 Look at this list of numbers.

4      14      72      5      9

Write down a number from the list which is

(a) a multiple of 7,

(a) ..... [1]

(b) a factor of 18,

(b) ..... [1]

(c) a prime number.

(c) ..... [1]

2 (a) Write these decimals in order of size, smallest first.

0.57                  0.507                  0.075

..... [1]  
*smallest*

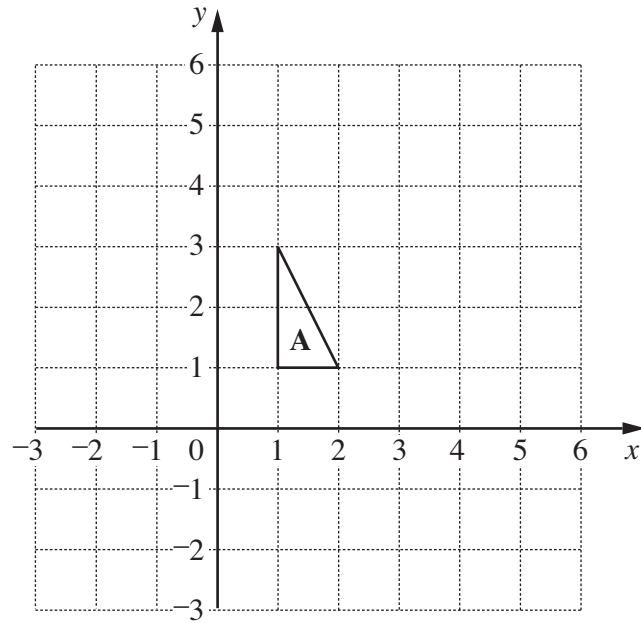
(b) Write 0.57 as a fraction.

(b) ..... [1]

(c) Write  $\frac{2}{5}$  as a percentage.

(c) .....% [1]

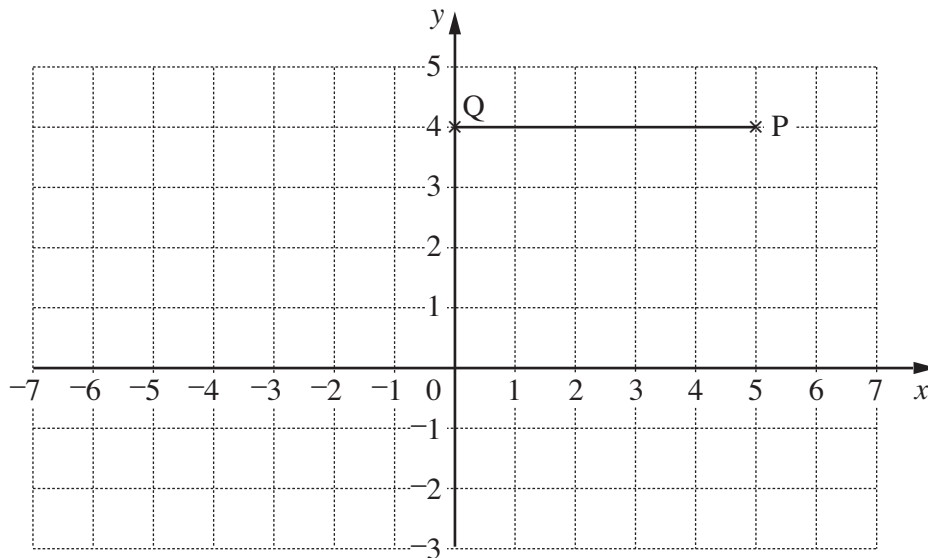
3 (a)



Reflect triangle **A** in the line  $x = 3$ .  
Label the image **B**.

[2]

(b)



- (i) Plot the point  $(-2, 1)$  on this grid.  
Label it R. [1]
- (ii) Mark point S on the grid so that PQRS is a parallelogram. [1]
- (iii) Write down the coordinates of S.

(b)(iii) (....., .....) [1]

- 4 (a) Marisa buys  $x$  oranges at 20p each.

Write a formula for the total cost,  $C$  pence, of these oranges.

(a)  $C = \dots\dots\dots$  [1]

- (b) David buys  $y$  green pens and 4 red pens.

Write a formula for the total number,  $T$ , of pens he buys.

(b)  $T = \dots\dots\dots$  [1]

- 5 An ordinary fair six-sided dice is rolled once.

- (a) Sean says

There is a 50-50 chance of getting a six.

Explain why Sean is wrong.

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

- (b) Heather says

The probability of getting an even number is 1 out of 2.

Write one thing that is wrong with this statement.

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

6 (a) Ashton Youth Club buys some new equipment.

(i) The club buys 36 mugs costing £1.99 each.

Work out the exact total cost.

(a)(i) £ ..... [2]

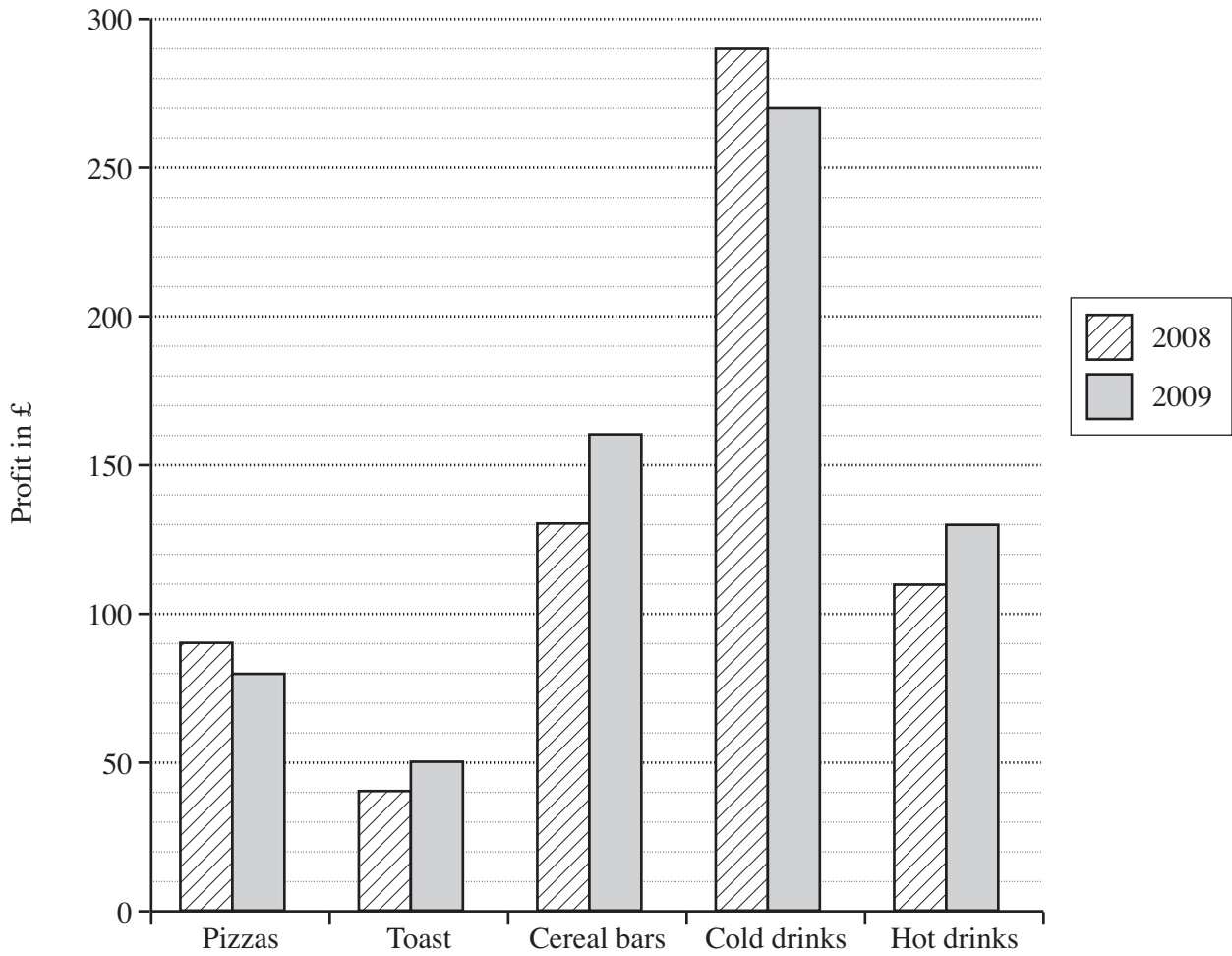
(ii) The club buys 18 chairs.  
These cost £288 altogether.

How much does one chair cost?  
Show all your working.

(ii) £ ..... [3]

(b) The Youth Club sells refreshments.

This graph shows how much profit was made on each type of refreshment during 2008 and 2009.



(i) How much profit was made on hot drinks during 2008?

(b)(i) £ ..... [1]

(ii) On which type of refreshment was the least profit made?

(ii) ..... [1]

(iii) How much more profit was made on cereal bars in 2009 than in 2008?

(iii) £ ..... [1]

(iv) In 2009, how much more profit was made on cold drinks than on hot drinks?

(iv) £ ..... [2]

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