

**GENERAL CERTIFICATE OF SECONDARY EDUCATION  
MATHEMATICS C (GRADUATED ASSESSMENT)**

**M6 2336A**

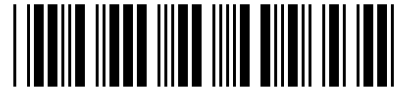
MODULE M6 – SECTION A

**MONDAY 22 JANUARY 2007**

Morning

Time: 30 minutes

Candidates answer on the question paper.  
Additional materials: Geometrical instruments  
Tracing paper (optional)



Candidate  
Name

Centre  
Number

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Candidate  
Number

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**INSTRUCTIONS TO CANDIDATES**

- Write your name, Centre Number and Candidate Number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- In many questions marks will be given for a correct method even if the answer is incorrect.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- **WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.**

**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.

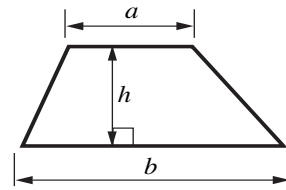
**WARNING**  
**You are not allowed to use a  
calculator in Section A of this paper.**

For Examiner's Use	
Section A	
Section B	
Total	

This document consists of **8** printed pages.

**Formula Sheet**

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



**PLEASE DO NOT WRITE ON THIS PAGE**

1 (a) Work out.

$$\frac{3}{5} \times \frac{1}{6}$$

Give your answer as a fraction in its simplest form.

(a)..... [2]

(b) Write the following in order of size, starting with the **smallest**.

$\frac{2}{3}$        $\frac{7}{10}$       68%      0.6

.....  
*smallest*      .....      .....      .....

[3]

5	
---	--

2 (a) Sam simplifies  $p \times p \times p \times p \times p$ .  
 She thinks the answer is  $5p$ .

Explain why her answer is wrong.

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

(b) Find the value of  $6x + 10$  when  $x = -3$ .

(b)..... [2]

(c) Factorise.

$$6x + 10$$

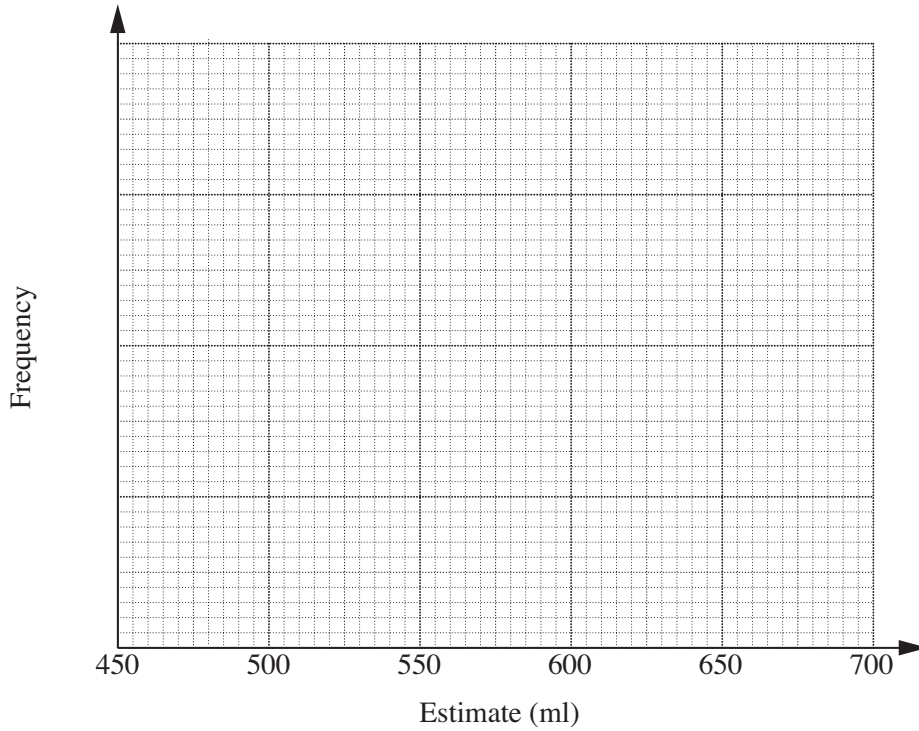
(c)..... [1]

4	
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- 3 Eighty students were asked to estimate the amount of liquid in a bottle. Their estimates are summarised in this table.

Estimate ( $e$ ml)	$450 < e \leq 500$	$500 < e \leq 550$	$550 < e \leq 600$	$600 < e \leq 650$	$650 < e \leq 700$
Frequency	4	10	16	34	16

- (a) Draw a frequency diagram to represent the information.



[3]

- (b) What is the modal group?

(b) ..... [1]

- (c) Sian said that the smallest estimate was 450 ml.

Explain why this cannot be true.

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

5

(d) 16 out of the 80 students estimated more than 650 ml.

What percentage is this?

(d) .....% [2]

7
---

4 Mushrooms cost £2.45 per kilogram.

Work out the cost of 2.6 kg of mushrooms.

**You must show your working.**

£ ..... [3]

3
---

6

- 5 Tom puts one party hat into each Christmas cracker.  
The hats are red, yellow or green.

The probability that a cracker contains a red hat is 0.35.  
The probability that a cracker contains a yellow hat is 0.4.

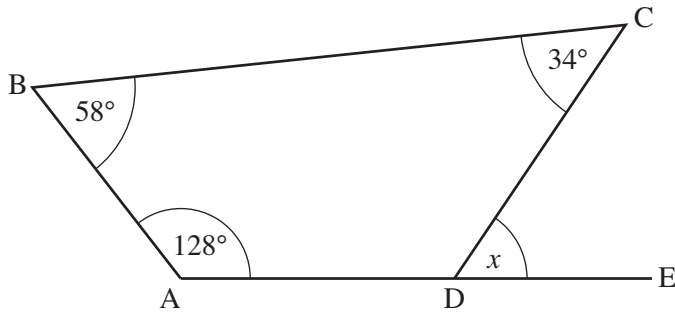
What is the probability that a cracker contains a green hat?

..... [2]

2
---

6

7



Not to scale

In the diagram, ABCD is a quadrilateral.  
ADE is a straight line.

(a) Work out angle  $x$ .

(a).....  $^\circ$  [3]

(b) Is BC parallel to AD?  
Use angles to explain your answer.

..... because .....

.....

..... [1]

4
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