

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

**M4**

**MONDAY 21 JANUARY 2008**

Morning  
 Time: 30 minutes

Candidates answer on the question paper  
**Additional materials:** Geometrical instruments  
 Tracing paper (optional)  
 Electronic calculator



\* G O P / T 5 5 7 7 \*

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.
- Do **not** write outside the box bordering each page.
- Write your answer to each question in the space provided.

**INFORMATION FOR CANDIDATES**

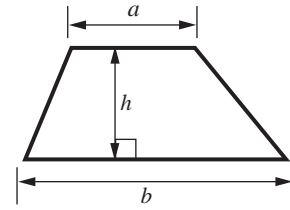
- The number of marks is given in brackets [ ] at the end of each question or part question.
- The total number of marks for this Section is 25.
- Section B starts with question 8.
- You are expected to use a calculator in Section B of this paper.

<b>FOR EXAMINER'S USE</b>	
<b>SECTION B</b>	

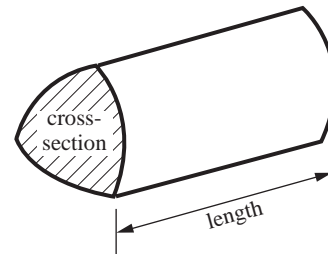
This document consists of **8** printed pages.

## Formulae Sheet

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

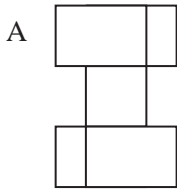


**Volume of prism** = (area of cross-section)  $\times$  length

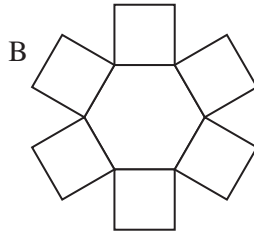


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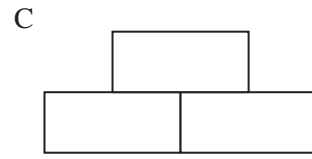
- 8 (a) Which of these shapes have rotational symmetry?  
Write *Yes* or *No* under each shape.



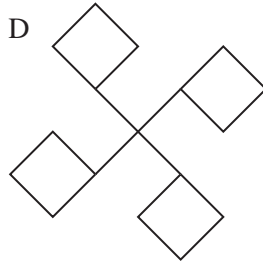
.....



.....



.....



.....



.....

[2]

- (b) Complete these sentences.

Shapes ..... and ..... have rotational symmetry of order 2.

Shape ..... has rotational symmetry of order 4.

[2]

4	
---	--

- 9 (a) Write 6 thousandths as a decimal.

(a)..... [1]

- (b) Write these decimals in order, starting with the smallest.

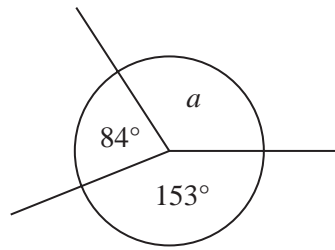
0.24      0.2      0.42      0.04      0.024

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

[2]

3	
---	--

10 (a)

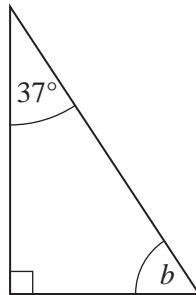


Not to scale

Work out angle  $a$ .

(a) .....° [1]

(b)

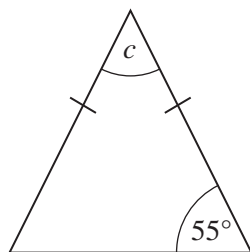


Not to scale

Work out angle  $b$ .

(b) .....° [2]

(c) This is an isosceles triangle.



Not to scale

Work out angle  $c$ .

(c) .....° [2]

5
---

- 11 Tariq receives this garage bill.

<p style="text-align: center;"><i>Goldstone Garages</i></p> <p>1 Service costing £487.23 4 Tyres costing £85.67 each 2.5 litres of antifreeze costing £4.60 per litre</p>
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Tariq pays the total bill in three equal payments.

How much is each payment?

**Show your working clearly.**

£ ..... [4]

4
---

12 (a) Terry owns a barber's shop.

The table shows the number of customers he has each day in one week.

Day	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Number of customers	23	25	19	21	28	37

(i) Work out the range of the number of customers.

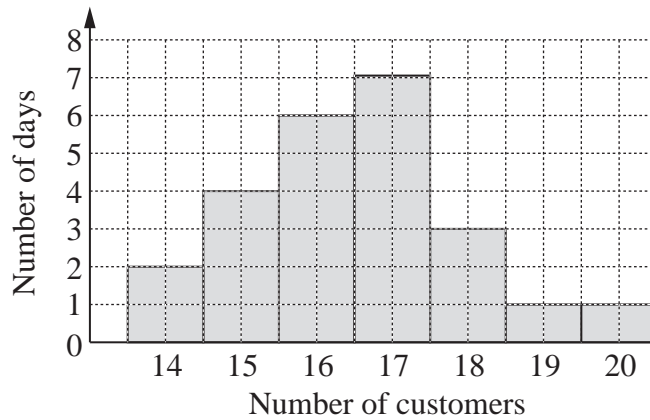
(a)(i) ..... [1]

(ii) Work out the mean number of customers per day.

(ii) ..... [3]

(b) Bev owns a hair salon.

The bar chart shows the number of customers she has each day for one month.



On how many days were there **more than** 17 customers?

(b) ..... [1]

- (c) The mean number of customers per day in Bev's salon is 16.5 and the range is 6.

Write two different statements comparing the number of customers per day that Terry and Bev have.

Statement One

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

Statement Two

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

7
---

- 13 (a) Cookies cost 35p each.

Write an expression for the total cost, in pence, of  $x$  cookies.

(a) ..... [1]

- (b) Sue bakes  $n$  muffins.  
Her children eat 5 of these muffins.

Write an expression for the number of muffins left.

(b) ..... [1]

2
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