



M5

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
 MODULE M5 – SECTION B

B275B

Candidates answer on the question paper.

OCR supplied materials:
None

- Other materials required:**
- Geometrical instruments
 - Tracing paper (optional)
 - Pie chart scale (optional)
 - Electronic calculator

Tuesday 1 March 2011
Morning

Duration: 30 minutes



Candidate forename		Candidate surname	
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Centre number						Candidate number				
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INSTRUCTIONS TO CANDIDATES

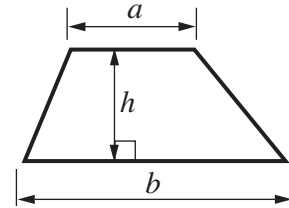
- Write your name, centre number and candidate number in the boxes above. Please write clearly and in capital letters.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully. Make sure you know what you have to do before starting your answer.
- Write your answer 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).
- 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.

INFORMATION FOR CANDIDATES

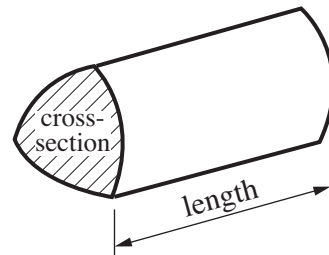
- The number of marks is given in brackets [] at the end of each question or part question.
- Section B starts with question 9.
- You are expected to use a calculator in Section B of this paper.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

Formulae Sheet

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

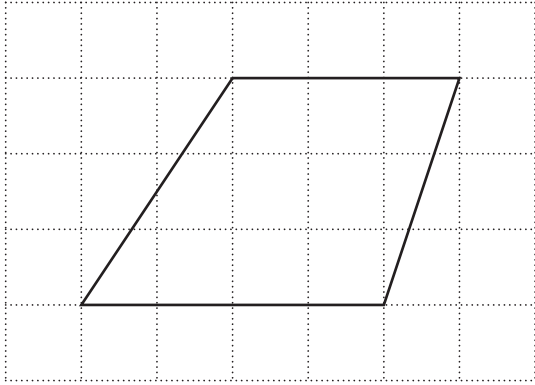


$$\text{Volume of prism} = (\text{area of cross-section}) \times \text{length}$$



PLEASE DO NOT WRITE ON THIS PAGE

- 9 Saima tried to draw a parallelogram.
This is her shape.



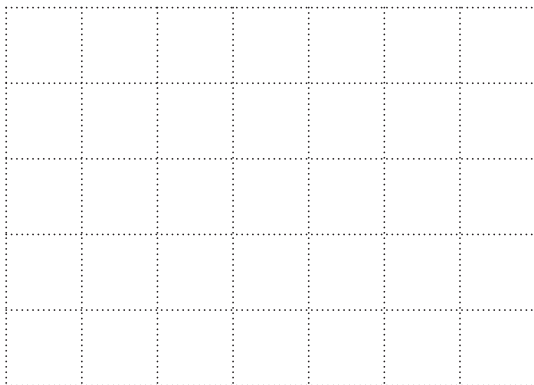
- (a) Explain why this is not a parallelogram.

..... [1]

- (b) What is the name of the quadrilateral that Saima has drawn?

(b) [1]

- (c) Draw a parallelogram on the grid below.



[1]

- 10 (a) Tony's Take Away sells pizzas.
Customers choose **two** toppings for their pizza from the list below.

<p style="text-align: center;"><u>Toppings</u></p> <p style="text-align: center;">Ham (H) Mushroom (M) Peppers (P)</p>

They can choose two different toppings or have both the same.

How many combinations of toppings are available?
Show how you worked it out.

(a) [2]

- (b) One lunchtime, 48 out of Tony's 80 customers are students.

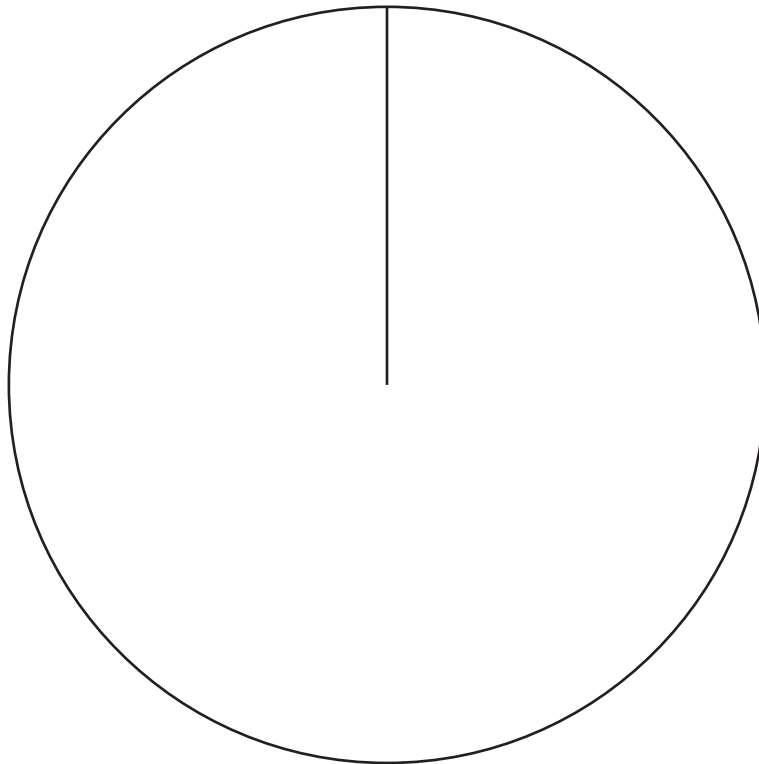
What percentage of his customers are students?

(b) % [2]

- (c) One evening, Tony sells 180 meals.
He records the number of each type he sells.

Pizza	90
Chicken	45
Pasta	27
Burger	18

Draw a pie chart to illustrate the data.



[4]

11 (a) Simplify.

(i) $4t + 2t - 3t$

(a)(i) [1]

(ii) $3a + 2b - a + 5b$

(ii) [2]

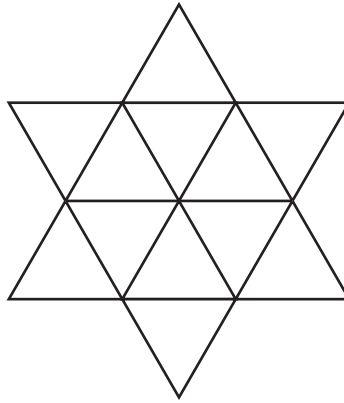
(b) Use the formula

$$e = 5c - 3d$$

to find e when $c = 2.5$ and $d = 4$.

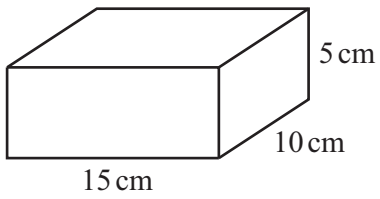
(b) [2]

- 12 Shade **six** of the small triangles in the shape below to make a pattern with rotation symmetry of order 3.



[2]

13



Find the volume of this cuboid.
Give the units of your answer.

.....[3]

TURN OVER FOR QUESTION 14

- 14** Andrea buys a new TV.
The cash price of the TV is £650.
Andrea buys the TV on credit.

<p>Cash price</p> <p>£650</p>

<p>Credit terms</p> <p>15% deposit plus 24 monthly payments of £25</p>

How much **more** than the cash price does Andrea pay?

£ [4]

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