

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

Monday 8 March 2010
Morning

Duration: 30 minutes



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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INSTRUCTIONS TO CANDIDATES

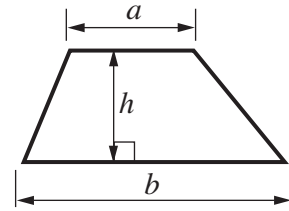
- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Show your working. 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, however additional paper may be used if necessary.

INFORMATION FOR CANDIDATES

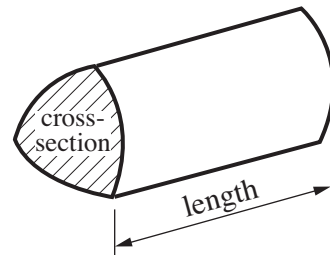
- The number of marks is given in brackets [] at the end of each question or part question.
- Section B starts with question 7.
- You are expected to use a calculator in Section B of this paper.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

Formulae Sheet

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



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



PLEASE DO NOT WRITE ON THIS PAGE

7 Solve.

(a) $v - 17 = 28$

(a) [1]

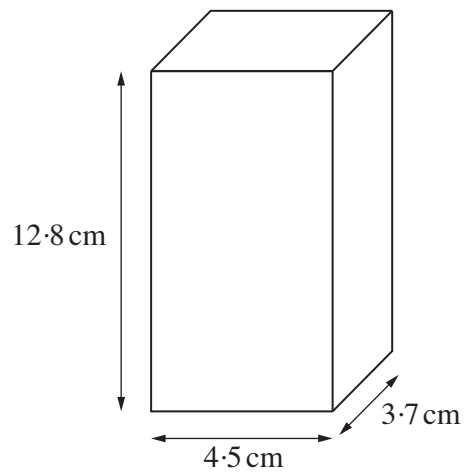
(b) $6w = 54$

(b) [1]

(c) $58 = 8x + 2$

(c) [2]

8



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

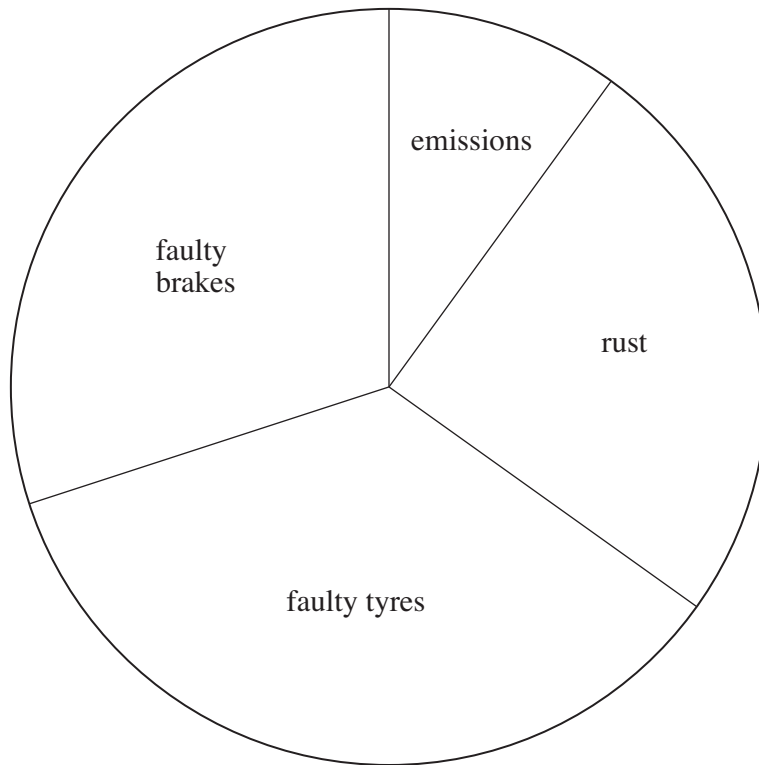
..... [3]

- 9 The price of a dishwasher in shop A was £400.
In a sale, the price is now reduced by 20%.
In shop B, the same dishwasher costs £350.

In which shop, A or B, is the dishwasher **now** cheaper, and by how much?
Show how you decide.

It is cheaper in shop by £..... [4]

10 (a) This pie chart shows the reason why each of 720 vehicles failed a roadworthy test.



(i) What percentage of the vehicles failed due to rust?

(a)(i)% [1]

(ii) Explain how you can tell that 72 of the 720 vehicles failed due to emissions.

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

(iii) How many of the 720 vehicles failed due to faulty tyres?

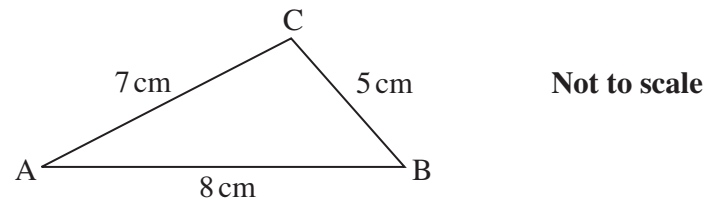
(iii) [3]

(b) Andrew took his car for a roadworthy test.
He says the probability that his car will pass the test is 0.35.

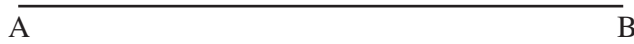
What is the probability that his car will not pass the test?

(b) [1]

- 11 Using a ruler and compasses, construct a full size drawing of triangle ABC. Leave in your construction lines.



The line AB has been drawn for you.



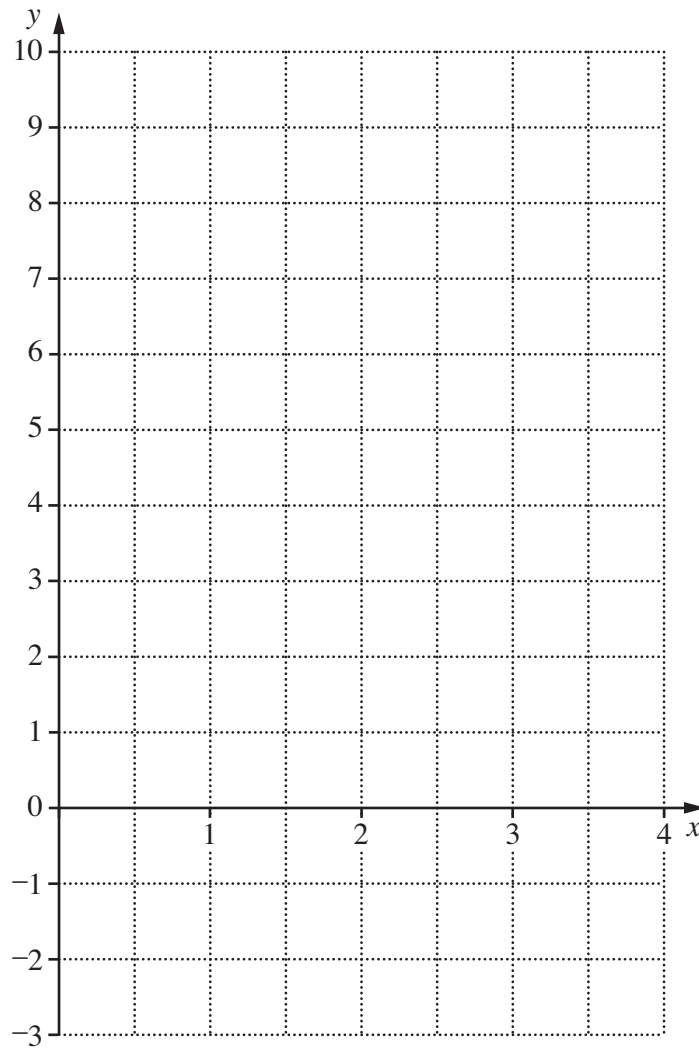
[3]

12 (a) Complete the table for $y = 3x - 1$.

x	0	1	2	3
y		2		

[1]

(b) Draw the graph of $y = 3x - 1$.



[2]

TURN OVER FOR QUESTION 13

13 Olav describes a shape to Lucy:

- All four sides are equal
- All angles are equal
- Opposite sides are parallel

Lucy says the shape is a trapezium.

Complete this sentence.

(a) It cannot be a trapezium because

..... [1]

(b) Give the special mathematical name of the shape.

(b) [1]



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