

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

B275A

Candidates answer on the question paper

OCR Supplied Materials:

None

Other Materials Required:

- Geometrical instruments
- Tracing paper (optional)
- Pie chart scale (optional)

Monday 9 March 2009
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.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

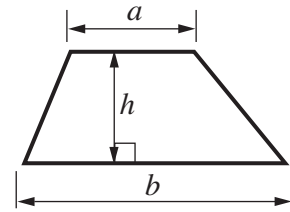
WARNING

No calculator can be used for Section A of this paper

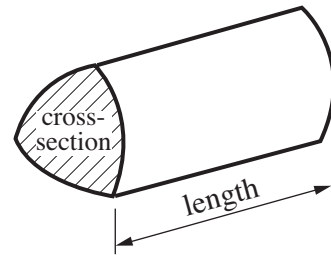
FOR EXAMINER'S USE	
SECTION A	
SECTION B	
TOTAL	

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 Fill in the missing numbers.

(a) $-8 + \dots = -2$ [1]

(b) $\dots \times 2 = -8$ [1]

(c) $2 - -8 = \dots$ [1]

(d) $4^3 = \dots$ [1]

(e) $3 \times 3 \times 3 \times 3 \times 3 = 3 \dots$ [1]

2 Tyrone has these cards.

A $e + e + e$	B $2e \times 4$	C $2e + 2e + 2e$	D $5e - e$		
3 $3e$	4 $4e$	5 $5e$	6 $6e$	7 $7e$	8 $8e$

Find the matching pairs.

The first pair has been done for you.

A	matches with	3
B	matches with	
C	matches with	
D	matches with	

[2]

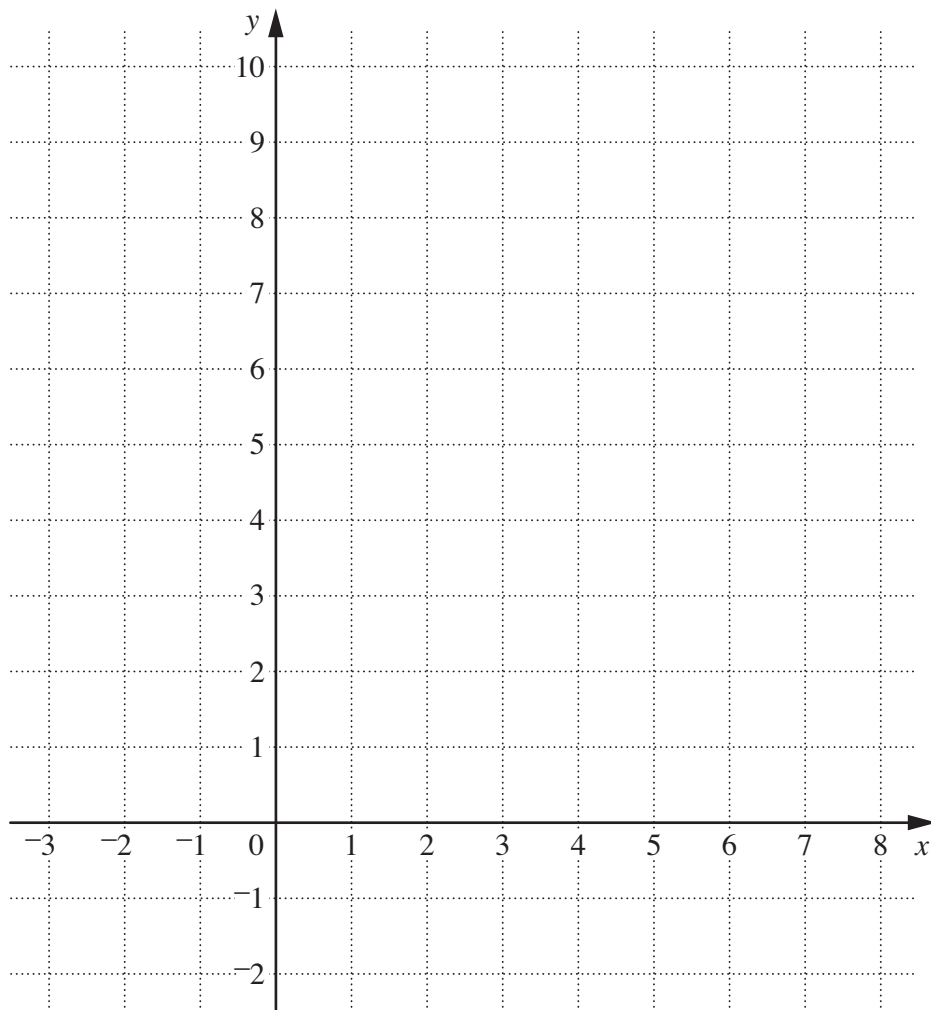
3 (a) Complete the table for this equation.

$$y = x + 5$$

x	1	2	3	4
y		7		

[1]

(b) Draw the graph of the equation $y = x + 5$.



[2]

4 (a) Round 48.947 to 1 decimal place.

(a) [1]

(b) Estimate the answer to $486.5 \div 52.38$.

Show the estimates you make.

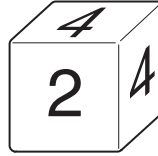
(b) \div = [2]

(c) Write a digit in each empty box to make a true statement.

$$\begin{array}{|c|} \hline 0 \\ \hline \end{array} \cdot \begin{array}{|c|} \hline \\ \hline \end{array} = \frac{\begin{array}{|c|} \hline \\ \hline \end{array} \begin{array}{|c|} \hline \\ \hline \end{array}}{\begin{array}{|c|} \hline 1 \\ \hline \end{array} \begin{array}{|c|} \hline 0 \\ \hline \end{array} \begin{array}{|c|} \hline 0 \\ \hline \end{array}}$$

[1]

- 5 (a) Mike has a fair dice labelled 2, 2, 3, 3, 4, 4.
Mike rolls this dice.



What is the probability that he gets a 4?

(a) [1]

- (b) (i) Petra has a fair coin, with a tail and a head.
She also has a fair spinner labelled 1, 2, 3, 4.
She spins the coin and the spinner together.
The first time she does this she gets a head and a 3 (H3).

In this space, list all the different combinations she could get.

[2]

- (ii) What is the probability she gets a **head** and an **odd number** on the next spin?

(b)(ii) [1]

6 Here are four statements that are **not always** true.

For each shape, complete the statement in the last column so that it is always true.
The first one has been completed for you.

Shape	Statement – not always true	Statement – always true
Square	All four angles are acute.	All four angles are right angles.
Rectangle	The diagonals bisect each other at right angles.	The diagonals ...
Rhombus	All four sides are 6 cm.	All four sides ...
Trapezium	It has two pairs of parallel sides.	It has ... parallel sides.

[3]

TURN OVER FOR QUESTION 7

7

$$\frac{20}{8}$$

$$2\frac{12}{16}$$

$$\frac{11}{16} \times 3$$

$$2\frac{1}{4}$$

$$\frac{42}{16}$$

Which of these is the largest?

You must show all your working.

The largest is [4]

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