B275B

GENERAL CERTIFICATE OF SECONDARY EDUCATION

MATHEMATICS C (GRADUATED ASSESSMENT)

MODULE M5 – SECTION B

M5

MONDAY 21 JANUARY 2008

Morning
Time: 30 minutes

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

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.

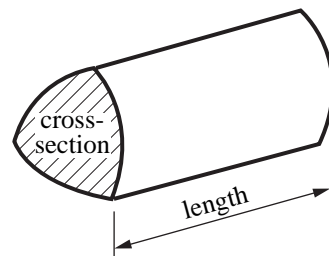**FOR EXAMINER'S USE**

SECTION B	
TOTAL	

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

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Formulae Sheet

Area of trapezium $= \frac{1}{2}(a + b)h$
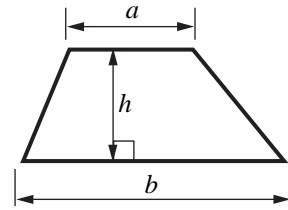
Volume of prism = (area of cross-section) × length

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8 A farm shop sells two types of tomato, *Andor* and *Baltimore*.
Six tomatoes of each type were weighed.
For the six *Andor* tomatoes, the mean weight was 82 g and the range was 35 g.
For the six *Baltimore* tomatoes, the weights in grams were

<div align="center">

62   **74**   **86**   **91**   **84**   **77**.

</div>

(a) Complete this table.

	Andor	*Baltimore*
Mean	82 g	.... g
Range	35 g	.... g

[4]

(b) Ben says,

"Andor tomatoes weigh less than Baltimore tomatoes."

Is Ben right? Explain how you decided.

.... because ....

.... [1]

(c) The probability that a customer at the farm shop buys tomatoes is 0·3.

What is the probability that a customer does not buy tomatoes?

(c) .... [1]

6

[Turn over

9   This scale drawing shows two villages, Aldwyn (A) and Beckram (B).

N

Scale: 1 cm represents 2 km

A

B
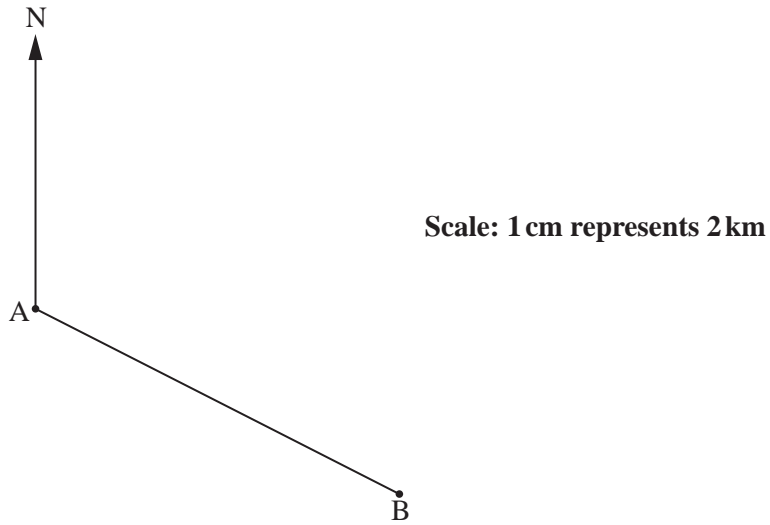
(a)   Find the distance between the two villages.

(a) .... km [2]

(b)   Measure the bearing of Beckram from Aldwyn.

(b) .... ° [1]

(c)   Copham is due West of Aldwyn.

Give the three-figure bearing of Copham from Aldwyn.

(c) ....° [1]

4

10 (a) Simplify.

    (i) $5x + 3x$

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

    (ii) $3a + 4b + 2a - b$

                                                          (ii) .... [2]

(b) Solve.

    (i) $18 = 3x$

                                                          (b)(i) .... [1]

    (ii) $2x - 9 = 7$

                                                          (ii) .... [2]

                                                    [Turn over

11 **(a)** For each of these statements, write whether it is true or false for a **rhombus**.

	True / False
It has four equal sides.	....
It has only one pair of equal angles.	....
Its diagonals have equal length.	....
Its diagonals bisect each other at right-angles.	....

[2]

(b) Sketch a kite. [1]

3
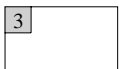
12 **(a)** The Khan family spent 120 minutes on the internet one day.

Aziz Khan used $\frac{2}{5}$ of these 120 minutes.

The Marsh family spent 60 minutes on the internet that day.
Sheila Marsh used 90% of those 60 minutes.

Who spent more time on the internet, Aziz or Sheila, and by how much?
Show how you decide.

(a) .... by .... minutes [5]

(b) The Devine family spent 200 minutes on the internet.
Sophie Devine used 60 of these 200 minutes.

What percentage of the Devine family internet time did Sophie use?

(b) ....% [1]

6

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