B276B

GENERAL CERTIFICATE OF SECONDARY EDUCATION

MATHEMATICS C (GRADUATED ASSESSMENT)
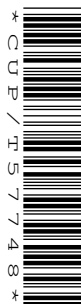
MODULE M6 – SECTION B

M6

TUESDAY 11 MARCH 2008

Morning
Time: 30 minutes

Candidates answer on the question paper
Additional materials (enclosed): None

Additional materials (required):
Geometrical instruments
Tracing paper (optional)
Scientific or graphical 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.
- 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.
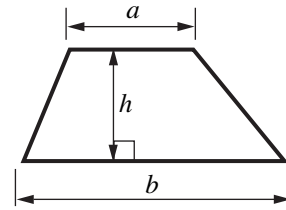- Use the π button on your calculator or take π to be 3·142 unless the question says otherwise.
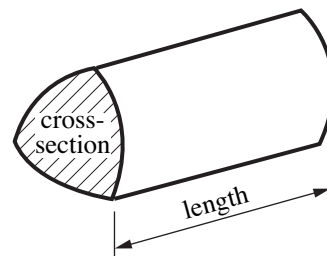
FOR EXAMINER'S USE	
SECTION B	

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

[Turn over

Formulae Sheet

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

Volume of prism = (area of cross-section) × length

8 **(a)** Complete this table of values for $x + y = 4$.

x	0	1	2	3	4
y		3			

[1]

(b) Draw the graph of $x + y = 4$.

[2]

[Turn over
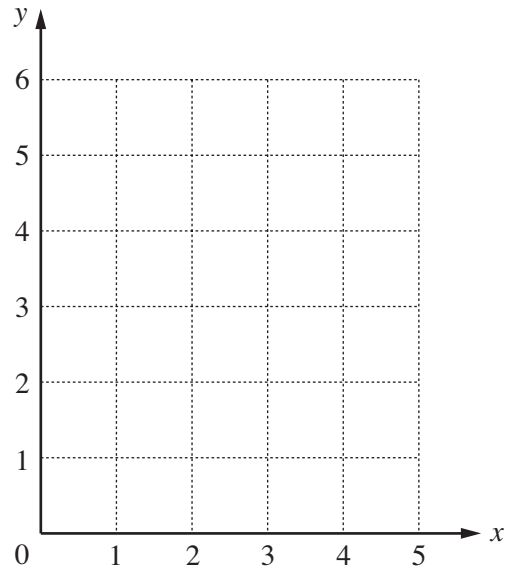
9 **(a)** Solve.

    (i) $2x + 3 = 8$

(a)(i) .... [2]

    (ii) $5x + 2 = 23 - 2x$

(ii) .... [3]

(b) Multiply out.

$$5(2x - 3)$$

(b) .... [1]

10 Calculate.

(a) $\sqrt{24 \cdot 1 - 12 \cdot 54}$

(a) .... [1]

(b) $\dfrac{9 \cdot 8^2}{13 \cdot 4 + 8 \cdot 1}$

Give your answer correct to 2 decimal places.

(b) .... [2]

(c) The answer to a calculation is 2·4 hours.

Write this time in hours and minutes.

(c) .... hours .... minutes [1]

[Turn over

11 Pino has made two steps from concrete blocks.
Each block is a cuboid.
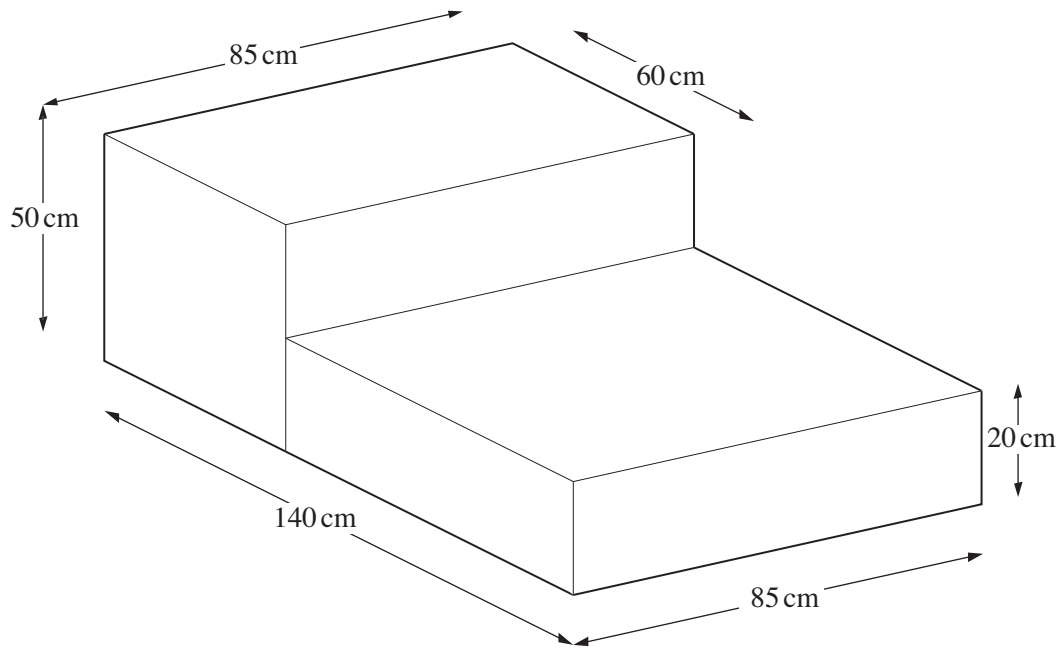
Work out the total volume of concrete used.
Give the units of your answer.

.... [4]

12 Teresa, Robert and Barbara each buy some carpet at the same price per square metre.
Teresa pays £456 for 16 square metres.

(a) Robert buys 35 square metres of carpet.
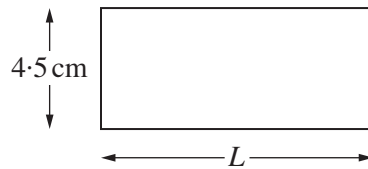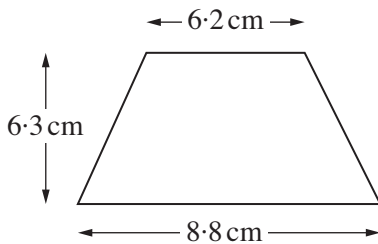
How much does he pay?

(a) £.................................. [2]

(b) Barbara pays £655·50.

How many square metres does she buy?

(b) .... [2]

13 The area of the trapezium is the same as the area of the rectangle.

Not to scale

Calculate the length, *L*, of the rectangle

.... cm [4]

PLEASE DO NOT WRITE ON THIS PAGE