OCR
RECOGNISING ACHIEVEMENT

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)

M3 B243B

MODULE M3 – SECTION B

TUESDAY 13 MARCH 2007 Morning

Time: 30 minutes

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

CUP/T34589

Candidate Name

Centre Number

Candidate Number

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre Number and Candidate Number in the boxes above.
- Answer **all** the questions.
- Use blue or black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure you know what you have to do before starting your answer.
- In many questions marks will be given for a correct method even if the answer is incorrect.
- Do **not** write in the bar code.
- Do **not** write outside the box bordering each page.
- WRITE YOUR ANSWER TO EACH QUESTION IN THE SPACE PROVIDED. ANSWERS WRITTEN ELSEWHERE WILL NOT BE MARKED.

INFORMATION FOR CANDIDATES

- You are expected to use a calculator in Section B of this paper.
- 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 6.

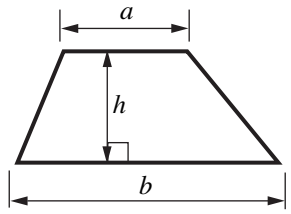
For Examiner's Use	
Section B	

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

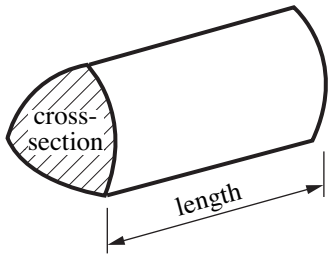
[Turn over

Formulae Sheet

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



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



PLEASE DO NOT WRITE ON THIS PAGE

6 **(a)** Write down the square number that lies between 20 and 30.

(a)..... [1]

(b) Work out.

$12^2 + 15^2$

(b) ..... [2]

3

7 **(a)** A carton contains 1·5 litres of apple juice.

How many millilitres of apple juice is this?

(a)..... ml [1]

(b) Leo makes fruit punch.
He uses this recipe.

Fruit Punch

750	ml	orange juice
500	ml	mango juice
2	litres	sparkling water

How much fruit punch does he make altogether?
Give your answer in litres.

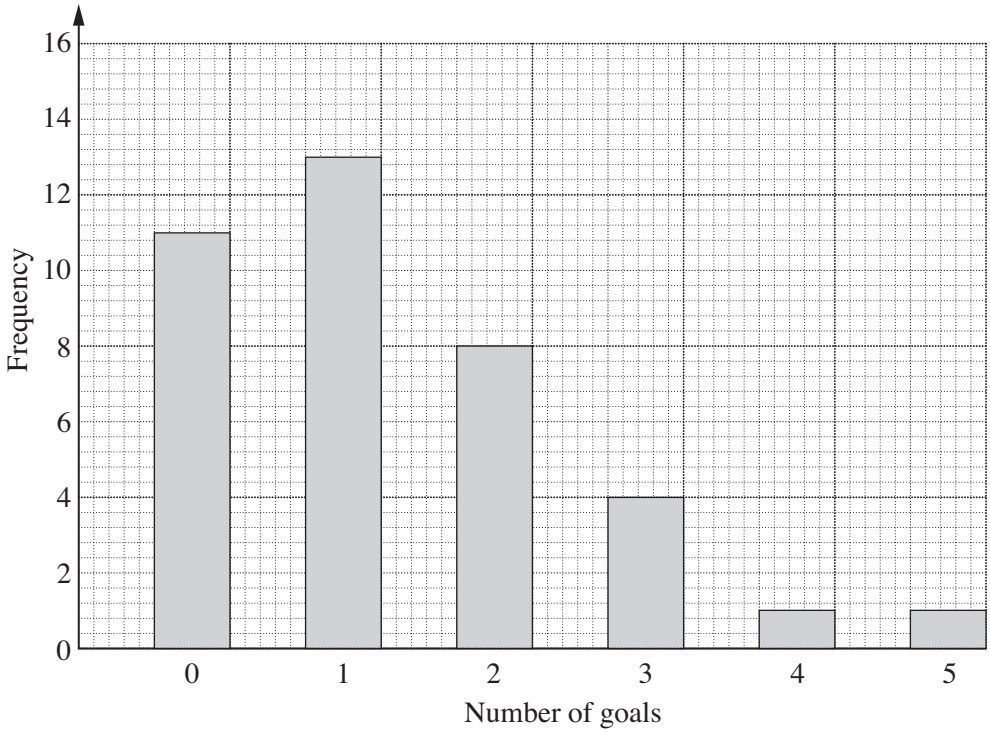
(b) ..... litres [2]

3

8 **(a)** Maninder recorded the number of goals his favourite football team scored in each game one season.

This bar chart shows his results.

Number of goals scored each game



(i) Use the bar chart to complete these sentences.

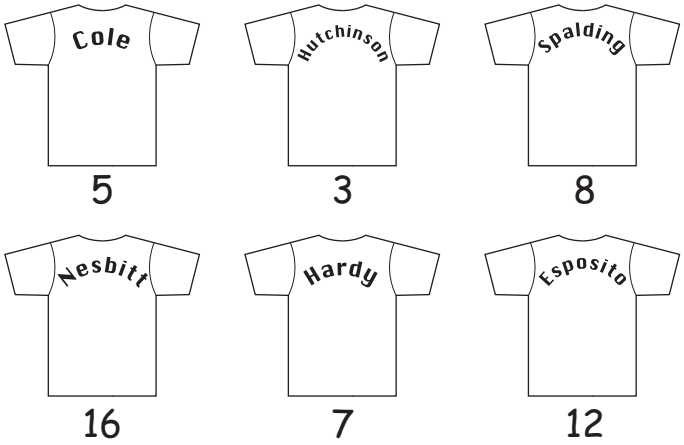
The most frequent number of goals scored was ..... . [1]

The team scored 2 goals in ..... games. [1]

(ii) How many games did the team play altogether in the season?

(a)(ii)..... [2]

(b) Maninder also recorded the total number of goals scored by each of his favourite players during that season.



Work out the mean number of goals scored by these players.

(b) ..... [3]

7

9 Solve.

(a) $3 + x = 15$

(a)..... [1]

(b) $25 - x = 14$

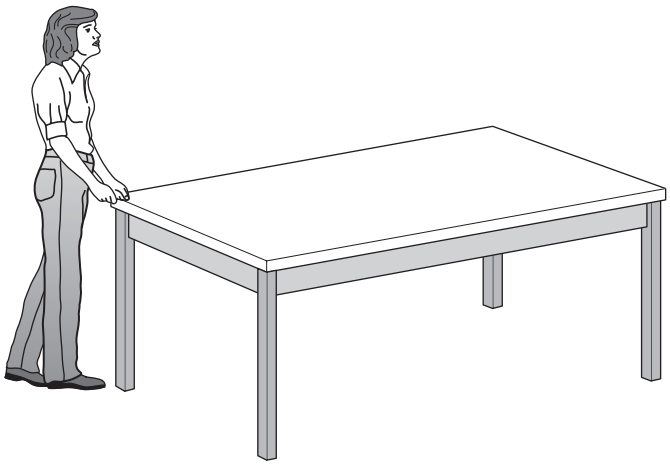
(b) ..... [1]

(c) $6x = 30$

(c)..... [1]

3

10 Estimate the height of Mrs Smith's table.
Give the units of your answer.



..... [2]

2

11 **(a)** Denise makes some cards to sell at a craft fair.
She uses this rule to work out the price in pence she will charge for each card.

> Multiply the cost of materials in pence by 2·5

(i) What price does Denise charge if the materials cost 80p?

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

(ii) Denise charges £1·00 for another card.

How much did the materials cost?

(ii)..... p [1]

(b) Maureen also makes some cards.
She uses this formula to work out the price in pence she will charge for each card.

$c = 2m + 50$

c is the price in pence
m is the cost of materials in pence

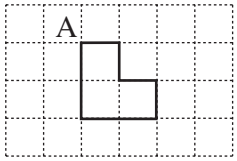
What price does Maureen charge if the materials cost 90p?

(b) ..... p [2]

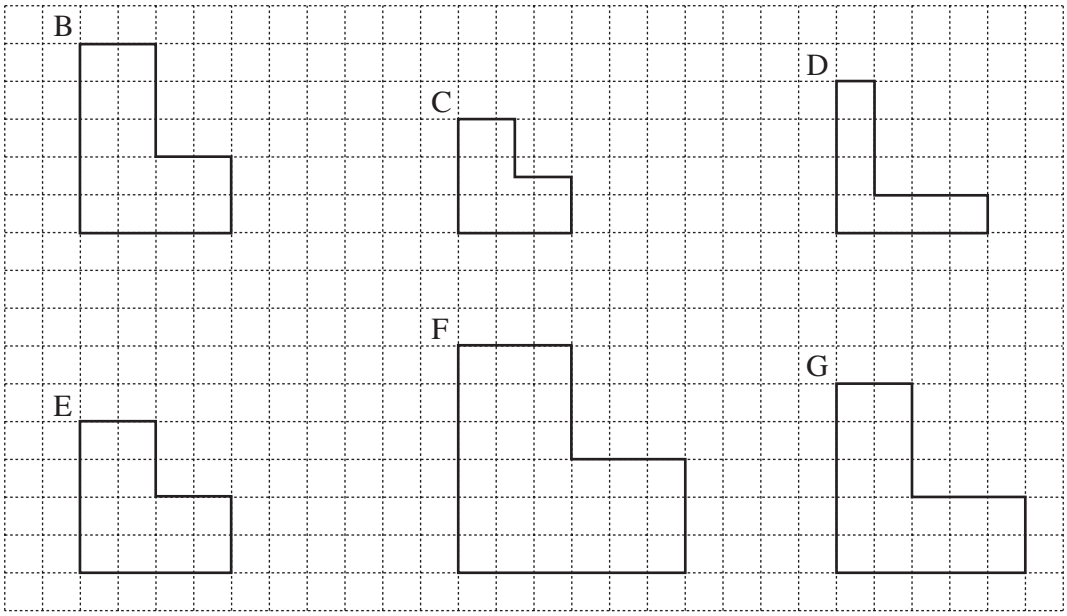
4

TURN OVER FOR QUESTION 12

12



Three of the shapes below are enlargements of shape A.



(a) Which shapes are **not** enlargements of shape A?

(a)..... [1]

(b) Complete the following.

Shape ..... is an enlargement of shape A with scale factor 2.

Shape ..... is an enlargement of shape A with scale factor ..... [2]

3