**MATHEMATICS C
(Graduated Assessment)**

1966/2336B

MODULE M6 – SECTION B

Monday   **23 JANUARY 2006**   Morning   30 minutes

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

Candidate
Name

Centre
Number

Candidate
Number

TIME   30 minutes

INSTRUCTIONS TO CANDIDATES

- Write your name, Centre number and candidate number in the boxes above.
- Answer **all** the questions.
- Write your answers on the dotted lines unless the question says otherwise.
- 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.
- There is a space after most questions. Use it to do your working. 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 in the grey area between the pages.
- **DO NOT** WRITE IN THE AREA **OUTSIDE** THE BOX BORDERING EACH PAGE. ANY WRITING IN THIS AREA 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 7.
- 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 question paper consists of 6 printed pages and 2 blank pages.

[Turn over

Formula Sheet

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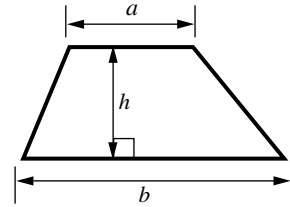
7 **(a)** Calculate.

$$13{\cdot}8 - \frac{5{\cdot}75}{4{\cdot}6}$$

(a) ....[1]

(b) Calculate.

$$1{\cdot}27^3$$

Give your answer correct to 2 decimal places.

(b) ....[2]

3

8 **(a)** The equation of a curve is $y = 2x^2 - 6$.

Work out the value of y when

(i) $x = 3$,

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

(ii) $x = -4$.

(ii) ....[1]

(b) Factorise.

$$2x^2 - 6$$

(b) ....[1]

3

[Turn over

9

Not to scale
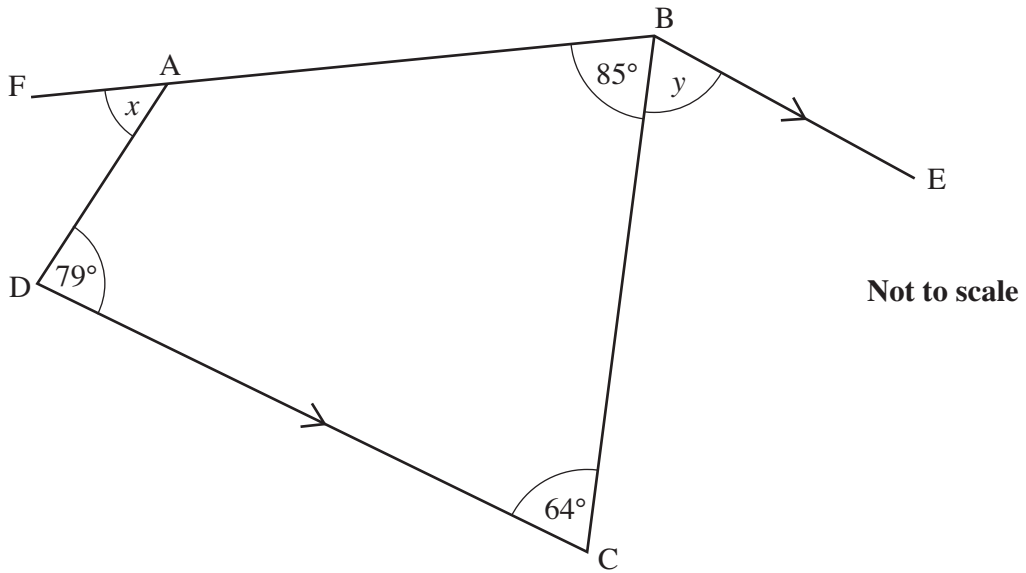
In the diagram FAB is a straight line.
BE is parallel to DC.

(a) Work out angle x.
Give a reason for each step of your working.

$x =$ .... ° because ....

....

....[3]

(b) Work out angle y.
Give a reason for your answer.

$y =$ .... ° because ....

....

....[2]

5

10 (a) In a lottery, Martin won £1800 and Pat won £4200.

Work out the ratio of Martin's winnings to Pat's winnings.
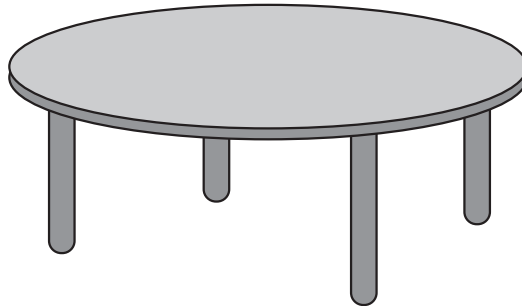Give your answer in its simplest form.

(a) .... : ....[2]

(b) Marion and Peter won £650 in a raffle.
They shared the £650 between them in the ratio 1 : 4.

How much was Peter's share?

(b) £ ....[2]

4

11

The picture shows a circular coffee table.
The radius of the top of the table is 55 cm.

Calculate the area of the top of the table.
Give the units of your answer.

....[3]

3

[Turn over

12 Hanif is playing a game with a **biased** four-sided dice.
The faces are numbered from 1 to 4.

The table shows the probabilities of the dice landing on the numbers 1 to 3.

Number	1	2	3	4
Probability	0·27	0·43	0·19	

Work out the probability of the dice landing on 4.

....[2]
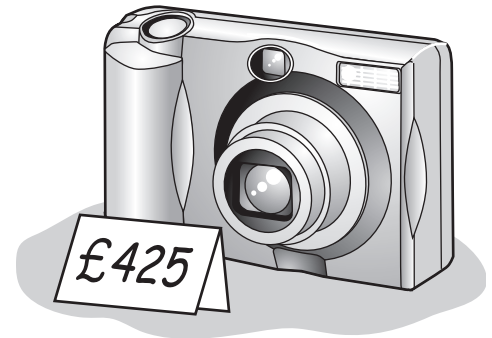
2	

13 The cash price of a camera is £425.

Here are the credit terms.

> Deposit 23% of the cash price
> PLUS
> 12 monthly payments of £31·50

£425

How much **more** is the **total** credit price than the cash price?

£ ....[5]

5	

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