MATHEMATICS C
(Graduated Assessment)

1966/2332A

MODULE M2 – SECTION A

Monday   **23 JANUARY 2006**   Morning   30 minutes

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

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

*   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.

WARNING
You are not allowed to use a
calculator in Section A of this paper.

FOR EXAMINER'S USE	
Section A	
Section B	
TOTAL	

This question paper consists of 8 printed pages.

[Turn over

Formula Sheet

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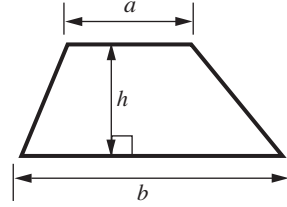
1 Work out.

    (a) £1·45 + £2·15

                                      (a) £..................................[1]

    (b) £9·35 – £2·20

                                        (b) £ ....[1]

    (c) 25% of £20

                                        (c) £..................................[2]

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4

</div>

2   **(a)** Fill in the missing numbers in this number pattern.

      101 × 101   **=**   **10201**

      1001 × 1001   **=**   **1002001**

      .... × ....   **=**   **100020001**

                                                           [1]

    (b) Fill in the missing number for the same number pattern.

      1000001 × 1000001 = ...   [1]

    (c) Fill in the missing numbers for the same number pattern.

      .... × .... = 10000000200000001   [1]

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3

</div>

[Turn over

3   Tom and James find these coins in their room.
    They share the money out equally.

    Which coins do they each get?

An image has been removed due to third party copyright restrictions

Details: An image of a selection of coins: one twenty pence coin, two ten pence coins, a two pence coin and six one pence coins

Tom ....

James ....[2]
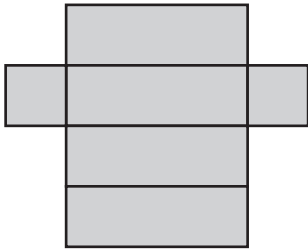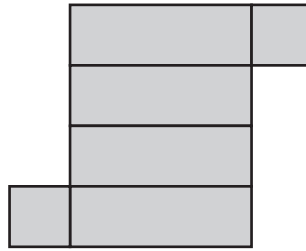
2

4   Look at these shapes.

Write **Yes** underneath the shapes that are the nets of a cuboid.
Write **No** under those that **are not** the nets of a cuboid.
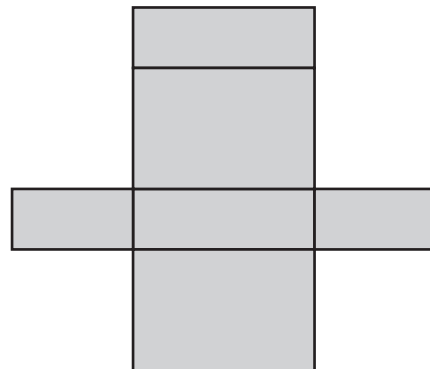
....

....

....

....

[2]

[Turn over
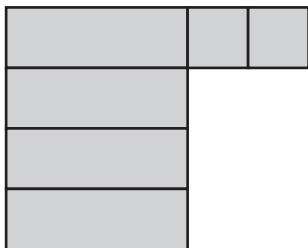
5   (a)   Amy notes the number of text messages she sends each day for a week.
             Here are the results.

                   18   21   24   15   24   22   24

      (i)   Write down the median of these numbers.

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

      (ii)   Write down the mode of these numbers.

                                                                    (ii) ....[1]

    (b)   During the Eid festival she sends 63 text messages.
           Each text message costs 3p to send.

           How much is this altogether?

                                                                    (b) £ ....[2]

    (c)   In 2003, 78 million text messages were sent on St Valentine's day.
           This was six times the number of Valentine cards sent.

           How many million Valentine cards were sent?

                                                                    (c) .... million [2]

    (d)   The maximum length of a text message is 100 characters.
           Marian has already keyed in 83 characters.

           How many more characters can she key in?

A photograph has been removed due to third party copyright restrictions

Details:

A photograph of a lady using a mobile phone.

                                                                    (d) ....[1]

(e) In a survey of 300 mobile phone users, 50% said they had sent
a text message in the last five minutes.

How many people was this?

(e) ....[1]

(f)

Millions of text messages sent each day in the UK			
	Year		
Month	2000	2001	2002
Jan.	10·6	30·6	45·6
Feb.	12·8	28·9	43·9
Mar.	12·2	28·3	43·3
Apr.	12·8	30·6	44·4
May	16·1	31·1	45·6
Jun.	16·7	32·2	45·6
Jul.	16·7	32·8	44·4
Aug.	17·8	34·4	45·0
Sep.	19·4	36·1	47·8
Oct.	21·7	38·3	50·6
Nov.	22·2	40·0	50·6
Dec.	24·4	42·2	52·8

Use the table to help you complete these sentences.

(i) In May 2001 .... million text messages were sent each day.   [1]

(ii) Between January 2000 and January 2002 the number of text messages sent each day

went up by .... million.   [2]

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TURN OVER FOR QUESTION 6

6   Complete this diagram so that the dotted line is a line of symmetry.

[2]