OCR
RECOGNISING ACHIEVEMENT

M4

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M4 – SECTION A

B274A

OCE/10395

Candidates answer on the question paper

OCR Supplied Materials:
None

Other Materials Required:
- Geometrical instruments
- Tracing paper (optional)

Tuesday 23 June 2009
Morning

Duration: 30 minutes

B274A

Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

MODIFIED LANGUAGE

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Show your working. Marks may be given for a correct method even if the answer is incorrect.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided, however additional paper may be used if necessary.

INFORMATION FOR CANDIDATES

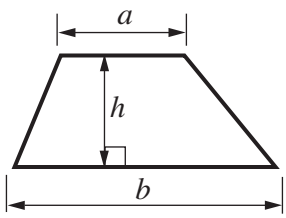
- The number of marks is given in brackets **[ ]** at the end of each question or part question.
- The total number of marks for this Section is **25**.
- This document consists of **8** pages. Any blank pages are indicated.

WARNING

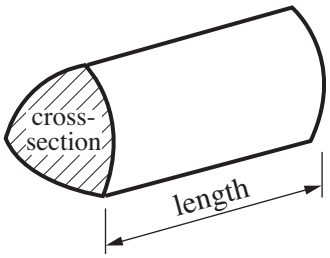
No calculator can be used for Section A of this paper

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

1 **(a)** Work out.

(i) 14·26 + 3·58

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

(ii) 1·32 × 6

(ii) .....**[1]**

(b) Here are some decimals.

0·405 0·45 0·54 0·054 0·504

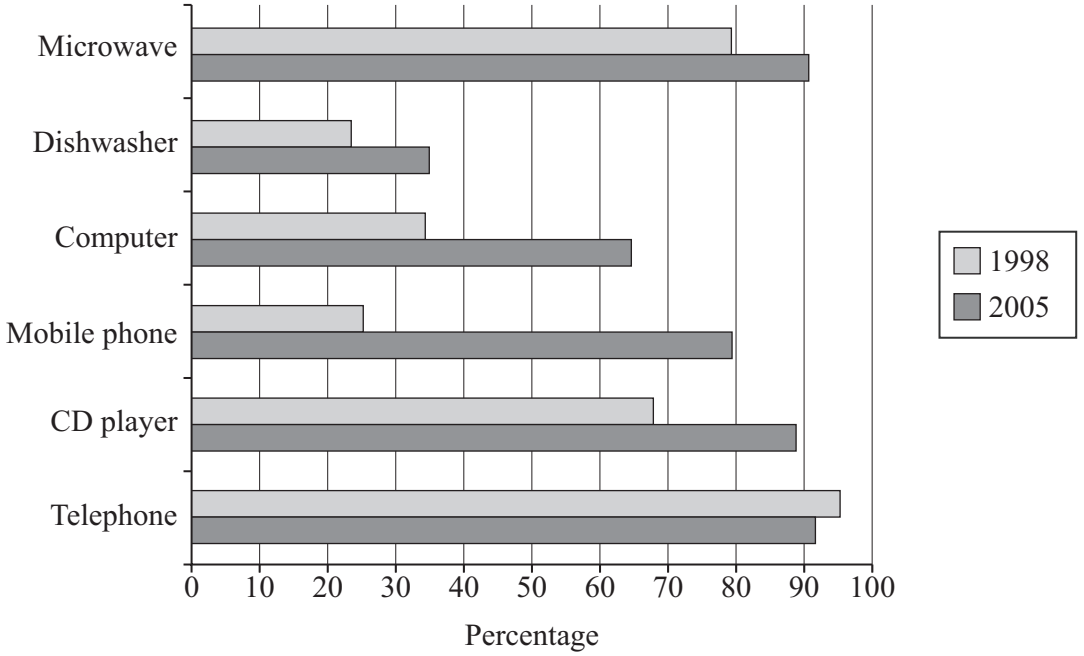
(i) Which is the largest of these decimals?

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

(ii) Which is the smallest of these decimals?

(ii) .....**[1]**

2 This graph shows the percentages of households which had certain items in 1998 and 2005.



(a) Use the graph to complete these sentences.

In 2005 less than 50% of households had a ..... . **[1]**

The percentage of households with a ..... went down between 1998 and 2005. **[1]**

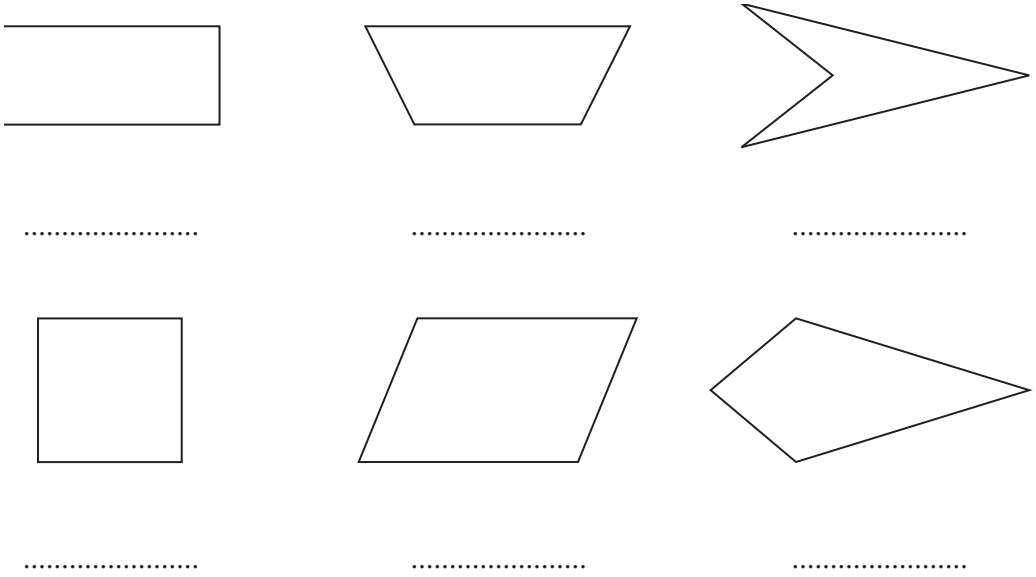
(b) The percentage of households with computers approximately doubled between 1998 and 2005.

Explain how the graph shows this.

.....

..... **[1]**

3 **(a)** Write the order of rotation symmetry under each of these quadrilaterals.

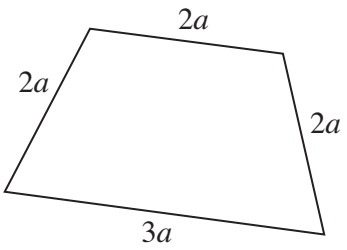


....

....

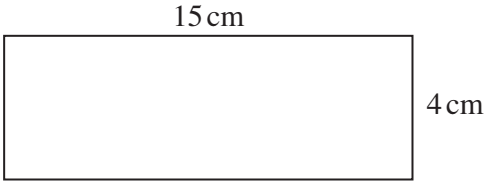
[3]

(b) Write a formula for the perimeter, P, of this quadrilateral.



(b) ..... **[2]**

(c) Work out the area of this rectangle.



Not to scale

(c) ..... cm^2 **[2]**

4 These patterns are made from sticks.

Pattern 1 Pattern 2 Pattern 3

(a) This table shows the number of sticks used in each pattern.

Complete the table.

Pattern	1	2	3	4	5
Number of sticks	5	9			

[2]

(b) Another pattern in the sequence is made from 33 sticks.

Which pattern is made from 33 sticks?

(b) Pattern ..... **[1]**

5 **(a)** Write down **two** common factors of 20 and 30.

(a) ..... and .....**[1]**

(b) Write down one prime number that lies between 20 and 30.

(b) .....**[1]**

(c) Ray says:

All multiples of 5 are odd.

He is wrong.

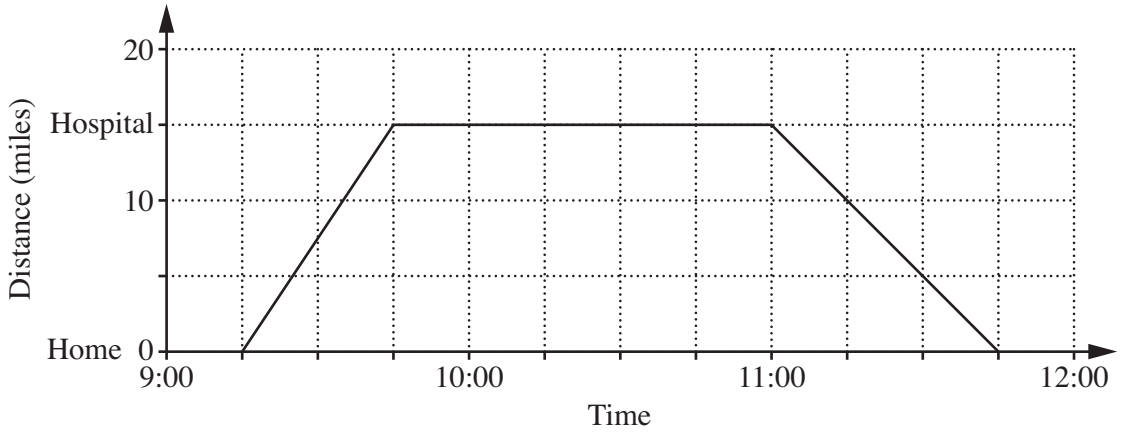
Give an example to show that he is wrong.

.....

.....**[1]**

TURN OVER FOR QUESTION 6

6 Ella drove from home to the hospital and back.
The graph shows her journey.



(a) (i) How far is the hospital from Ella's home?

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

(ii) Work out Ella's speed, in miles per hour, driving from home to the hospital.

(ii) ..... mph **[2]**

(b) How long did Ella spend at the hospital?
Give your answer in hours and minutes.

(b) ..... hour ..... minutes **[1]**

(c) At what time did Ella arrive home?

(c) .....**[1]**