Candidate Forename		Candidate Surname	

Centre Number						Candidate Number				

OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GENERAL CERTIFICATE OF SECONDARY EDUCATION

B274A

MATHEMATICS C (GRADUATED ASSESSMENT)

MODULE M4 – SECTION A

TUESDAY 23 JUNE 2009: Morning
DURATION: 30 minutes

SUITABLE FOR VISUALLY IMPAIRED CANDIDATES

Candidates answer on the question paper

OCR SUPPLIED MATERIALS:

None

OTHER MATERIALS REQUIRED:

Geometrical instruments
Tracing paper (optional)

WARNING
No calculator can be used for Section A of this paper.

READ INSTRUCTIONS OVERLEAF

DC (CW/SW) OV90822 11300/2

INSTRUCTIONS TO CANDIDATES

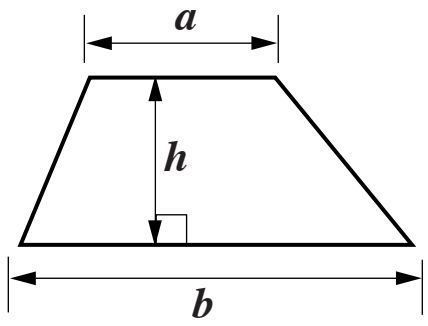
- **Write your name clearly in capital letters, your Centre Number and Candidate Number in the boxes on the first page.**
- **Use black ink. Pencil may be used for graphs and diagrams only.**
- **Show your working. Marks may be given for a correct method even if the answer is incorrect.**
- **Read each question carefully and make sure that you know what you have to do before starting your answer.**
- **Answer ALL the questions.**
- **Write your answer to each question in the space provided, however additional paper may be used if necessary.**

INFORMATION FOR CANDIDATES

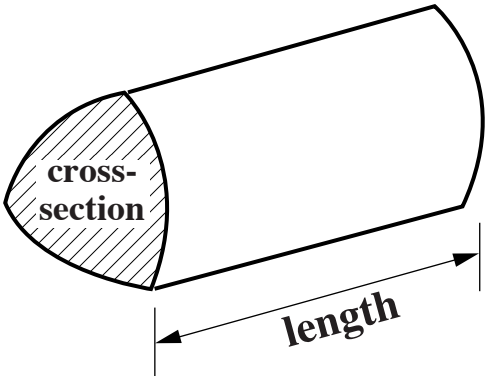
- **The number of marks is given in brackets [ ] at the end of each question or part question.**
- **The total number of marks for this Section is 25.**

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

[1 mark]

(a)(i) _____

(ii) 1·32 × 6

[1 mark]

(ii) _____

(b) Here are some decimals.

0·405 0·45 0·54 0·054 0·504

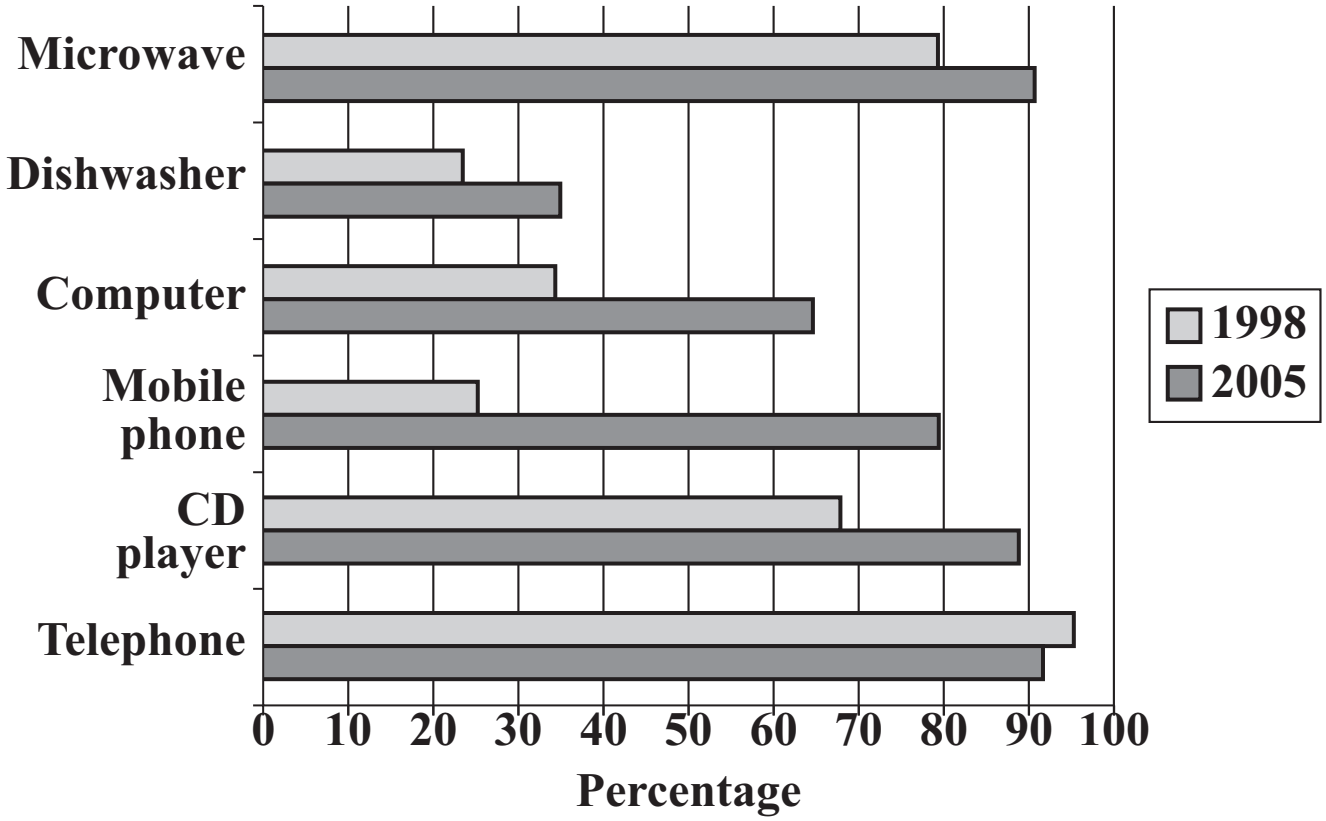
(i) Which is the largest of these decimals?
[1 mark]

(b)(i) _____

(ii) Which is the smallest of these decimals?
[1 mark]

(ii) _____

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



(a) Use the graph to complete these sentences.

In 2005 less than 50% of households owned a

_____

[1 mark]

The percentage of households owning a

_____ went down between 1998 and 2005.

[1 mark]

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

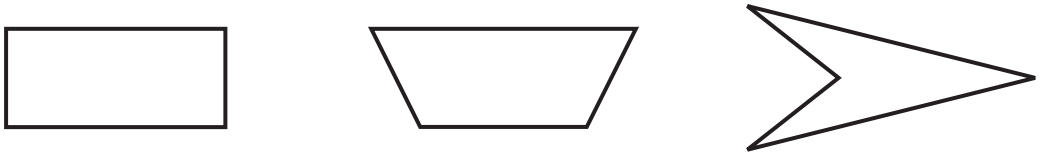
Explain how the graph shows this.

_____

_____

[1 mark]

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



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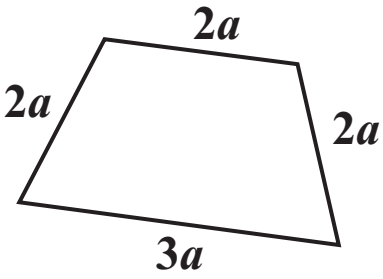
....

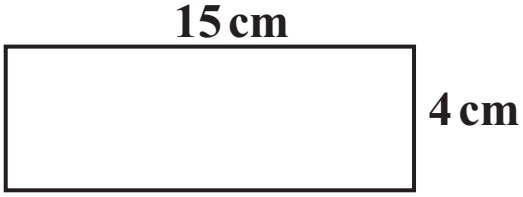
[3 marks]

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



[2 marks] **(b)** _____

(c) Work out the area of this rectangle.

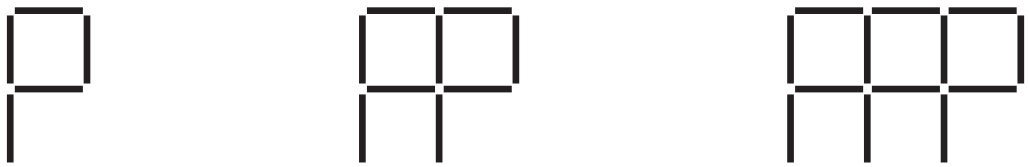


Not to scale

[2 marks] **(c)** _____ **cm^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 marks]

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

Which pattern is made from 33 sticks?
[1 mark]

(b) Pattern _____

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5 (a) Write down <u>TWO</u> common factors of 20 and 30.
[1 mark]

(a) _____ and _____

(b) Write down one prime number that lies between 20 and 30.
[1 mark]

(b) _____

(c) Ray says:

All multiples of 5 are odd.

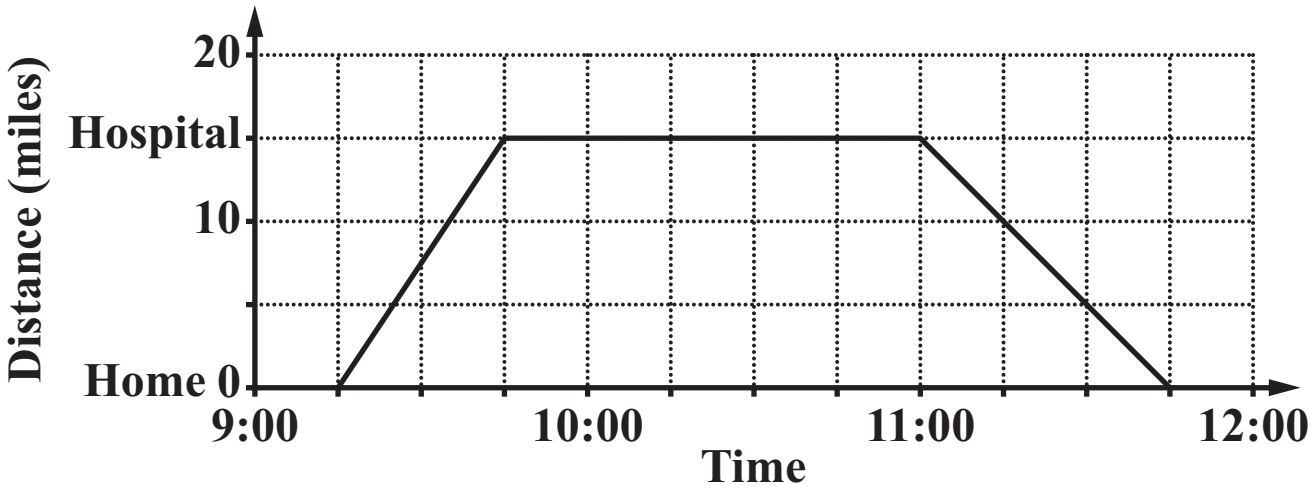
He is wrong.

Give an example to show that he is wrong.
[1 mark]

_____

_____

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?
[1 mark]

(a)(i) _____ miles

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

(ii) _____ mph

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

(b) _____ hour _____ minutes

(c) At what time did Ella arrive home?
[1 mark]

(c) _____

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