

GENERAL CERTIFICATE OF SECONDARY EDUCATION
MATHEMATICS C (GRADUATED ASSESSMENT)
MODULE M6 – SECTION A

B276A

Candidates answer on the Question Paper

OCR Supplied Materials:
None

Other Materials Required:

- Geometrical instruments
- Tracing paper (optional)

Monday 8 March 2010
Morning

Duration: 30 minutes



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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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.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Show your working. Marks may be given for a correct method even if the answer is incorrect.
- 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.

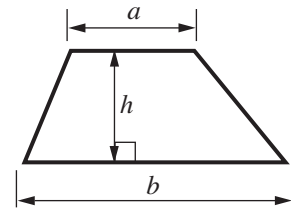
WARNING



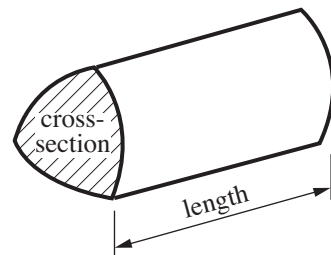
No calculator can be used for Section A of this paper

Formulae Sheet

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



Volume of prism = (area of cross-section) \times length

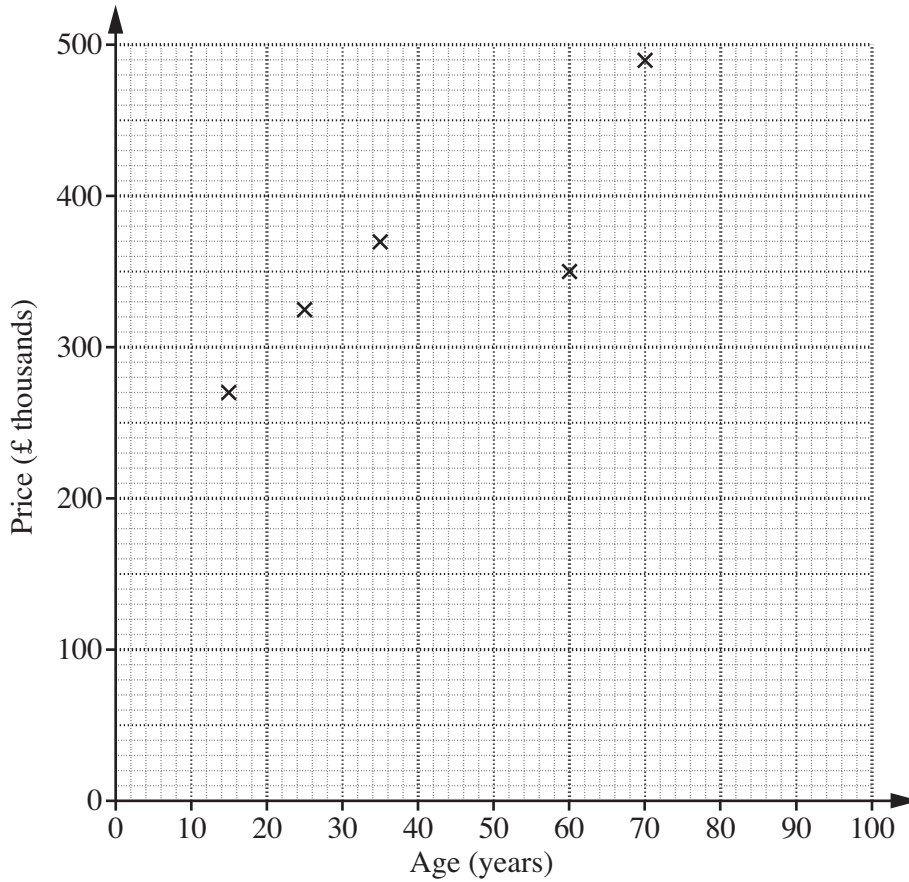


PLEASE DO NOT WRITE ON THIS PAGE

1 This table shows the age and price of 10 four-bedroomed houses in a town.

Age (years)	35	15	25	60	70	50	5	80	90	10
Price (£ thousands)	370	270	325	350	490	220	350	375	235	325

The results for the first five houses have been plotted on the scatter diagram below.



(a) Complete the scatter diagram. [2]

(b) Navneet wants to estimate the price of a four-bedroomed house in this town that is 30 years old.

Explain why she cannot use the scatter diagram to estimate the price.

.....
 [1]

2 Work out.

(a) 3×2^3

(a) [1]

(b) $(14 - 8)^2$

(b) [1]

3 (a) Work out.

$$\frac{3}{8} \times \frac{5}{6}$$

Give your answer in its simplest form.

(a) [2]

(b) Find a fraction that lies between $\frac{2}{3}$ and $\frac{3}{4}$.

Show your working.

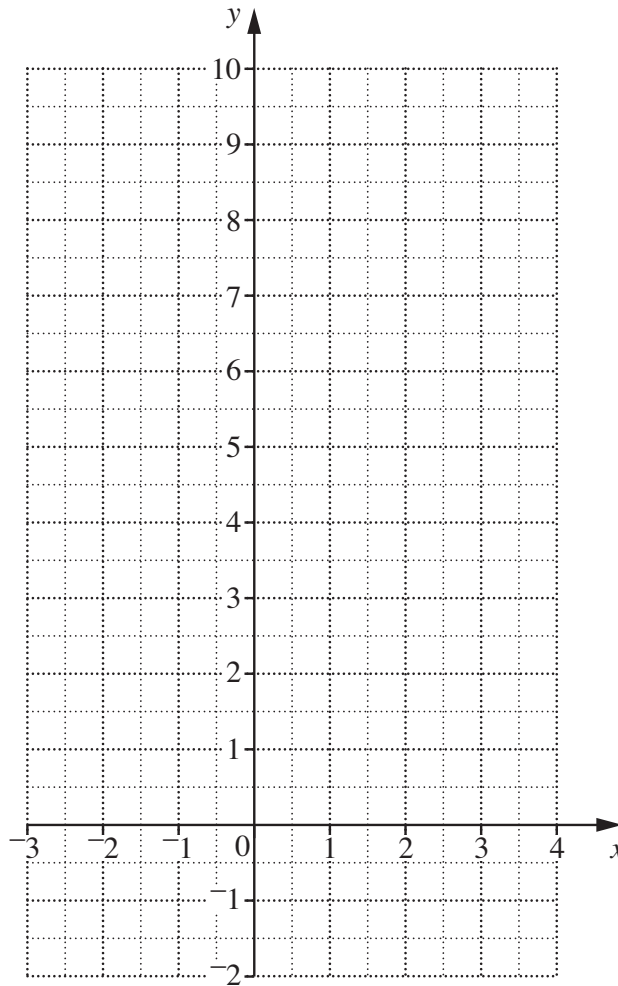
(b) [2]

4 (a) Complete the table of values for $y + 2x = 6$.

x	0	1	2	3
y				0

[1]

(b) Draw the graph of $y + 2x = 6$.



[2]

(c) Use your graph to find the value of y when $x = -1.5$.

(c) [1]

5 Sam repairs computers.

He charges £25 for each job plus £22.50 for each hour he works on the repair.

He also charges for the cost of the parts he uses.

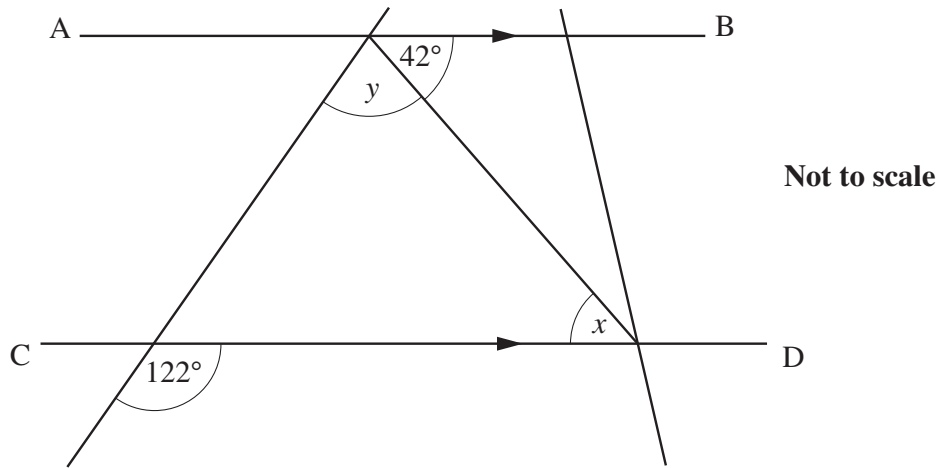
Work out how much Sam will charge for a job which takes him $3\frac{1}{2}$ hours, using parts costing £47.75.

You **must** show your working.

£ [5]

6

7



In the diagram, AB is parallel to CD.

Find angles x and y .

Give reasons for each answer.

$x = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$ [2]

$y = \dots\dots\dots^\circ$ because $\dots\dots\dots$
 $\dots\dots\dots$ [2]

TURN OVER FOR QUESTION 7

7 (a) Simplify.

$$a \times a \times a \times a$$

(a) [1]

(b) Work out the value of $b^2 + 2b$ when $b = -3$.

(b) [2]



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