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Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
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General Certificate of Secondary Education
Foundation Tier
March 2012

Mathematics

43602F

Unit 2

F

Wednesday 7 March 2012 9.00 am to 10.15 am

<p>For this paper you must have:</p> <ul style="list-style-type: none"> mathematical instruments. <p>You must not use a calculator.</p>	
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Time allowed

- 1 hour 15 minutes

Instructions

- Use black ink or black ball-point pen. Draw diagrams in pencil.
- Fill in the boxes at the top of this page.
- Answer **all** questions.
- You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
- Do all rough work in this book.

Information

- The marks for questions are shown in brackets.
- The maximum mark for this paper is 66.
- The quality of your written communication is specifically assessed in Questions 4, 7 and 12. These questions are indicated with an asterisk (*)
- You may ask for more answer paper and graph paper. These must be tagged securely to this answer booklet.

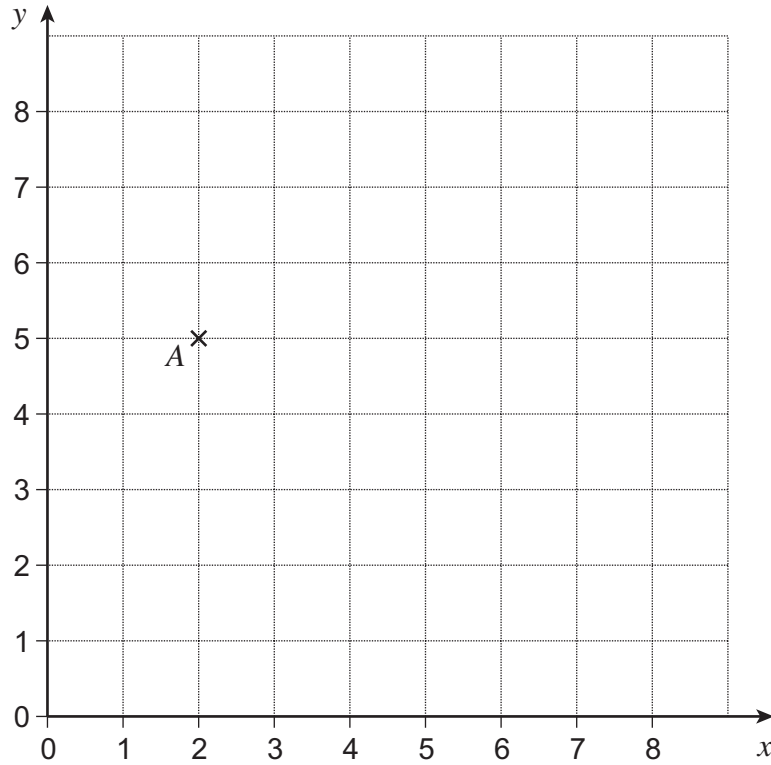
Advice

- In all calculations, show clearly how you work out your answer.



Answer **all** questions in the spaces provided.

- 1** Point A is shown on the grid.



- 1 (a)** Write down the coordinates of A .

Answer (..... ,) (1 mark)

- 1 (b)** Plot point B (8,1) on the grid.

(1 mark)

- 1 (c)** Work out the coordinates of the midpoint of AB .

Answer (..... ,) (2 marks)



2 (a) Circle the **two** multiples of 7

6 10 16 21 25 27 32 35

(2 marks)

2 (b) Circle the **two** factors of 30

6 10 16 21 25 27 32 35

(2 marks)

2 (c) Circle the **two** square numbers.

6 10 16 21 25 27 32 35

(2 marks)

3 Work out $321 - 123$

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.....
.....

Answer (2 marks)



*4 Mr and Mrs Jones and their two children go to the cinema.

Ticket Prices		
Single tickets	Adult	£9.25
	Child	£5.50
Family ticket	2 adults and 2 children	£25.00

Mr Jones buys the family ticket instead of single tickets.

How much does he save?

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Answer £ (4 marks)

5 Two numbers add up to 200.
The difference between the numbers is 30.

Work out the numbers.

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Answer and (2 marks)



6 Here is a sequence.

8 14 20 26 32

6 (a) Write down the rule for continuing the sequence.

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Answer (1 mark)

6 (b) Write down the next **two** numbers in the sequence.

Answer and (1 mark)

6 (c) The 50th term in the sequence is 302.

What is the 48th term in the sequence?

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.....

Answer (2 marks)

Turn over for the next question



*7 Amie buys

a book for £5.99

a newspaper for £1.80

3 pens for 27p each.

She only has a £10 note.

How much change should she receive?

You **must** show your working.

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Answer £ (4 marks)



8 In each part, circle the odd one out.
Give a reason for your answer.

8 (a) 75% $\frac{3}{4}$ 0.75 7.5

Reason

.....
(1 mark)

8 (b) $\frac{2}{6}$ $\frac{4}{10}$ $\frac{6}{18}$ $\frac{8}{24}$

Reason

.....
(1 mark)

8 (c) $\sqrt{64}$ $\sqrt{81}$ $\sqrt{125}$ $\sqrt{144}$

Reason

.....
(1 mark)

8 (d) 11 13 15 17

Reason

.....
(1 mark)



9 Mel wants to make 20 pancakes.

She needs $\frac{1}{4}$ litre of milk to make 4 pancakes.

She has one litre of milk.

Does she have enough milk to make all the pancakes?

You **must** show your working.

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(3 marks)

10 Here are six number cards.

-7	-5	-3	-2	0	2
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Sort the cards into three pairs so that each pair has the same total.

.....
.....
.....
.....

	and		Total =
	and		Total =
	and		Total =

(2 marks)



11 (a) Solve $\frac{y}{3} = 8$

.....

Answer $y =$ (1 mark)

11 (b) Simplify fully $3c + 5d + 4c - 2d$

.....

Answer (2 marks)

11 (c) Given that $P = 3e + 5f$

work out the value of P when $e = 4$ and $f = -2$

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Answer (2 marks)

Turn over for the next question



***12** Which is bigger, 0.38 or $\frac{3}{8}$?

You **must** show your working.

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Answer (3 marks)

13 (a) Write the number one hundred thousand as a power of 10.

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Answer (1 mark)

13 (b) Work out the value of $\frac{2^3 \times 5^2}{10}$

.....
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Answer (3 marks)



14 Sophie spent $\frac{1}{4}$ of her pocket money on magazines.
Then she spent $\frac{2}{3}$ of what she had left on a present.
She now has £6.
How much pocket money did she start with?

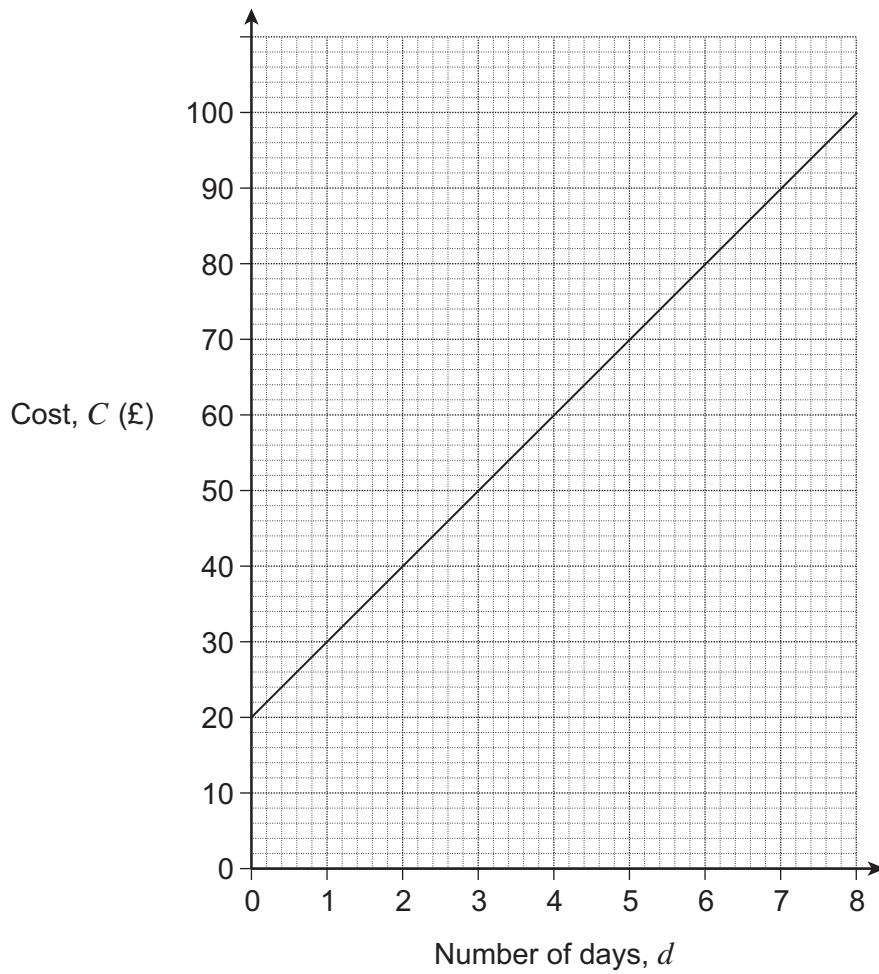
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Answer £ (4 marks)

Turn over for the next question



- 15 The graph shows the cost, C (£), of hiring a car for d days from Roy's Rentals.



- 15 (a) Circle the correct formula for hiring a car from Roy's Rentals.

$$C = 20d + 100$$

$$C = 10d + 20$$

$$C = 20d + 10$$

$$C = 5d + 20$$

(1 mark)



15 (b) The cost of hiring a car from First Cars is given by the formula $C = 8d + 30$

Plot the graph of $C = 8d + 30$ on the grid opposite.

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(2 marks)

15 (c) Toby wants to hire a car for 7 days.

Which of these firms should he use?
Give a reason for your answer.

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(2 marks)

Turn over for the next question



16 (a) Solve $\frac{12-x}{3} = 5$

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Answer $x =$ (3 marks)

16 (b) Rearrange this formula to make t the subject.

$$s = 3t + 4$$

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.....

.....

Answer $t =$ (2 marks)



There are no questions printed on this page

**DO NOT WRITE ON THIS PAGE
ANSWER IN THE SPACES PROVIDED**

