

Centre Number						Candidate Number				
Surname										
Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
Pages	Mark
2-3	
4-5	
6-7	
8-9	
10-11	
12-13	
TOTAL	



General Certificate of Secondary Education
Foundation Tier
November 2011

Mathematics

43602F

Unit 2

Monday 14 November 2011

9.00 am to 10.15 am

F

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

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 3, and 16. 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.



N 0 V 1 1 4 3 6 0 2 F 0 1

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

1 Here are four number cards.



1 (a) Write the number 5247 in words.

Answer

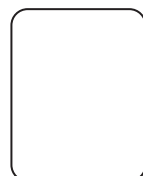
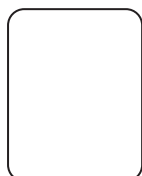
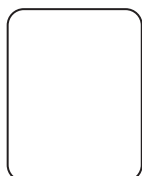
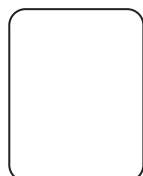
.....
(1 mark)

1 (b) Write the number 5247 to the nearest hundred.

Answer (1 mark)

1 (c) What is the largest number you can make using all four cards?

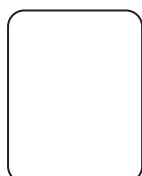
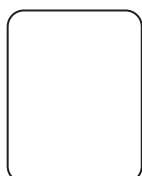
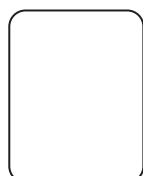
.....



(1 mark)

1 (d) What is the smallest **even** number you can make using all four cards?

.....



(2 marks)



2 (a) Complete the table.

Fraction	Decimal	Percentage
$\frac{3}{4}$		75%
$\frac{9}{10}$	0.9	
	0.3	30%

(3 marks)

2 (b) Write $\frac{3}{4}$, 0.9 and 30% in order with the smallest first.

.....

Answer,, (1 mark)

*3 Emma wants to buy

- 2 magazines at £1.70 each
- 3 birthday cards at £2.25 each.

She only has a £10 note.

Is this enough?
You **must** show your working.

.....

.....

.....

.....

.....

.....

(4 marks)



4 Jack shares these coins with Lucy.



50p



20p



20p



20p



10p



10p



10p



5p



5p

They both receive the same amount.

Write down the coins they could receive.

.....

.....

.....

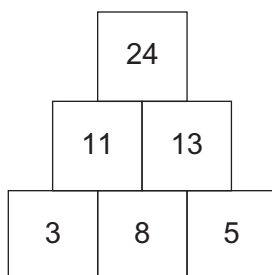
Answer Jack

Lucy

(4 marks)

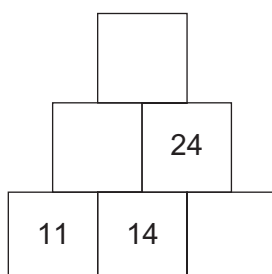


5 Here is a number pyramid.



Each number is found by adding the two numbers directly below.
For example $8 + 5 = 13$

5 (a) Complete this number pyramid.

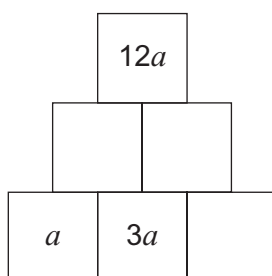


.....

.....

(2 marks)

5 (b) Complete this algebra pyramid.



.....

.....

.....

(3 marks)



6 This table shows the ingredients needed to make six flapjacks.

Butter	75 grams
Sugar	60 grams
Oats	175 grams
Syrup	1 tablespoon

Complete the table to show the ingredients needed to make 24 flapjacks.

Butter grams
Sugar grams
Oats grams
Syrup tablespoons

.....

.....

.....

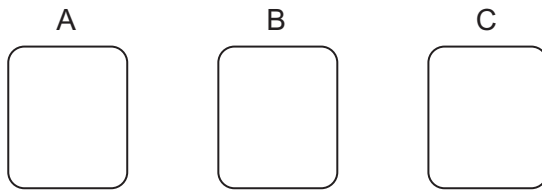
.....

.....

(4 marks)



7 Here are three cards.



Write a different whole number on each card so that

- the numbers add up to 60
- the number on card A is a multiple of 10
- the number on card B is three times the number on card C.

.....

.....

.....

.....

.....

(3 marks)

8 There are six cakes in a box.
The box and the cakes weigh 200 grams altogether.
The box weighs 20 grams.
Each cake weighs the same.
What does one cake weigh?

.....

.....

.....

.....

Answer grams (3 marks)



9 (a) Complete the table of values for $2x + y = 10$

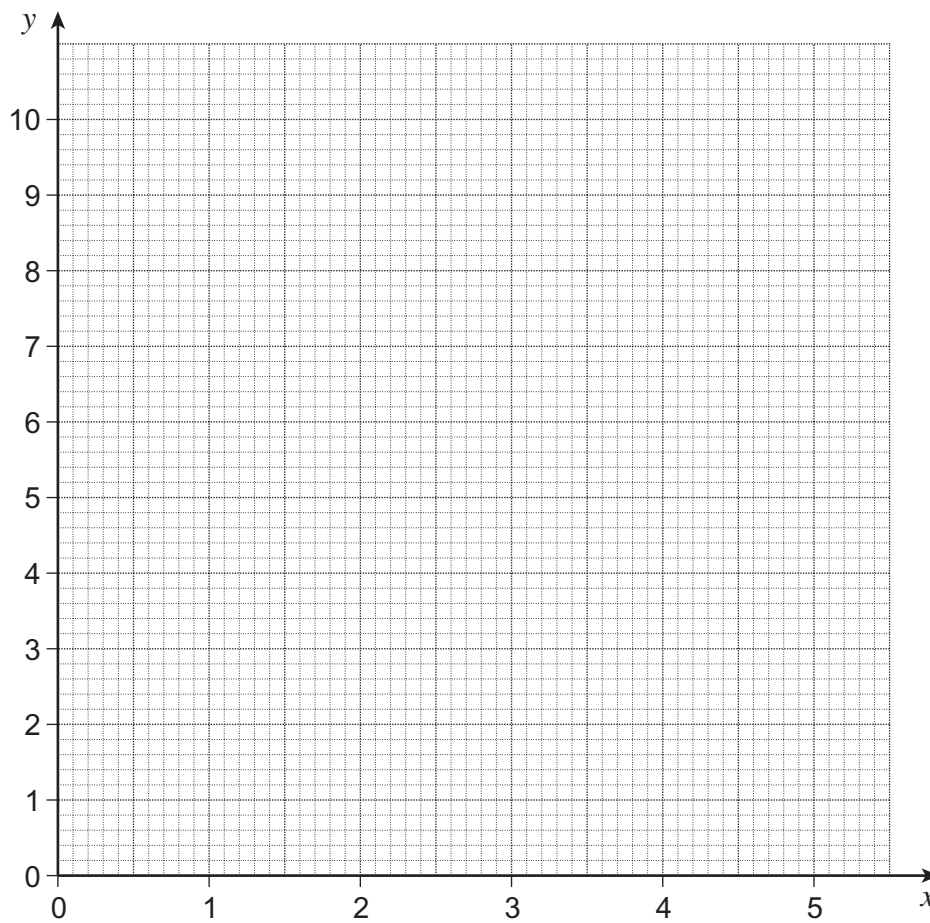
x	0	1	2	3	4	5
y	10		6		2	

.....

.....

(2 marks)

9 (b) On the grid draw the graph of $2x + y = 10$ for values of x from 0 to 5.



(2 marks)



10 Two-thirds of a number is 8.
Work out four times the number.

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

Answer (3 marks)

11 w is an even number.
For each statement, tick the correct box.

	Always true	Sometimes true	Never true
$4w - 3$ is even.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$4w - 3$ is prime.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
$4w - 3$ is a multiple of 9.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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

(3 marks)



12 Given that $25.6 \times 32 = 819.2$

12 (a) work out $\frac{81.92}{32}$

.....

Answer (1 mark)

12 (b) work out 0.256×320

.....

Answer (1 mark)

13 In May, a coat costs £64.
In June, the May price is rounded to the nearest £10.
In July, the June price is reduced by 20%.

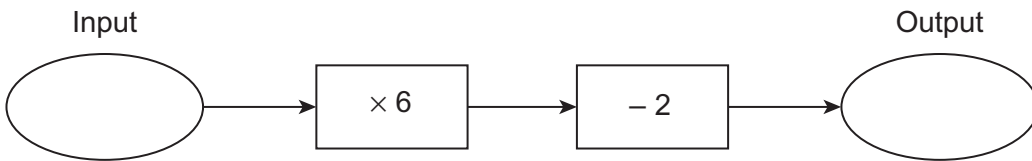
Ian has £50.

Does he have enough money to buy the coat in July?

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

(3 marks)

14 Here is a number machine.



The output is twice the input.

Work out the input.

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

Answer (3 marks)



15 (a) Find the value of $3x + 2y$ when $x = 4$ and $y = -5$

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

Answer (2 marks)

15 (b) Solve $\frac{c}{4} = 3$

.....

Answer $c =$ (1 mark)

15 (c) Solve $2(3w - 4) = 7$

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

Answer $w =$ (3 marks)

15 (d) Expand $a(a^2 + 4)$

.....
.....

Answer (2 marks)



***16**

Last year, 12 students went to the theatre.
The total cost of the tickets was £240.

This year, 8 students are going.
The cost of each ticket has increased by 15%.
They have a total of £200.

Is this enough to buy 8 tickets?
You **must** show your working.

.....

.....

.....

.....

.....

.....

.....

(5 marks)



17 Ali, Beth and Clare take a test.

The ratio of Ali's score to Beth's score is 5 : 3
Ali scored 10 more marks than Beth.

Clare scored 7 more marks than Ali.

Work out each of their scores.

.....

.....

.....

.....

.....

.....

Answer Ali marks

Beth marks

Clare marks

(3 marks)

END OF QUESTIONS



There are no questions printed on this page

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



There are no questions printed on this page

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



There are no questions printed on this page

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

