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Other Names										
Candidate Signature										

For Examiner's Use	
Examiner's Initials	
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16	
TOTAL	



General Certificate of Secondary Education
Foundation Tier
November 2014

Mathematics

43602F

Unit 2

Wednesday 5 November 2014 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>	
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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 space 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, 14 and 15. 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 book.

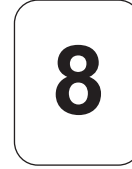
Advice

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



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

1 Here are four cards.



1 (a) Write down the value of the digit 5 in the number 5348

[1 mark]

Answer

1 (b) Write the number 5348 to the nearest hundred.

[1 mark]

Answer

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

[1 mark]

Answer

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

[1 mark]

Answer



2 (a) Circle the multiple of 7

[1 mark]

13

22

27

35

2 (b) Circle the factor of 36

[1 mark]

8

12

19

72

2 (c) Circle the number that is **not** a square number.

[1 mark]

64

36

121

48

Turn over for the next question



3 Bottles of milk cost 65p each.

***3 (a)** Work out the cost of four bottles.

[2 marks]

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.....

Answer £

3 (b) Molly pays for the 4 bottles of milk with a £5 note.

How much change should she get?

[1 mark]

.....
.....

Answer £



4 (a) Write 30% as a fraction.

[1 mark]

.....
.....

Answer

4 (b) Write 80% as a decimal.

[1 mark]

.....
.....

Answer

4 (c) Circle the **two** values that are equivalent to $\frac{2}{3}$

[2 marks]

$$\frac{66}{100}$$

$$0.\dot{6}$$

$$60\%$$

$$\frac{66}{99}$$

$$0.6$$

Turn over for the next question



5 Three bags each contain the same number of discs.

2 discs are taken out of one of the bags.
There are now 5 discs in this bag.

Work out the total number of discs that are now in the three bags.

[2 marks]

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Answer

6 A sequence begins 1 6 16

The rule for the sequence is

Double the previous term and add 4

Work out the next **two** terms in the sequence.

[2 marks]

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.....
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.....

Answer and



7 Asif has **ten** coins.
He has only 10p, 20p and 50p coins.
The ten coins total £3.20

Work out how many of each coin he has.

[3 marks]

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

Answer 10p coins

..... 20p coins

..... 50p coins

8 (a) Simplify $2f + 3e + 4f$

[1 mark]

.....

Answer

8 (b) Solve $x - 7 = 29$

[1 mark]

.....

$x =$



9 A recipe needs 300 grams of flour to make 4 cakes.

9 (a) How much flour is needed to make 6 cakes?

[2 marks]

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Answer grams

9 (b) 1 kg = 1000 grams

How many cakes can be made from a 1.5 kg bag of flour?

[3 marks]

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Answer



10 Students are put into 9 groups.
5 groups each have 24 students.
The other 4 groups have an equal number of students.
Altogether there are 204 students.
How many students are there in each of the other 4 groups?

[3 marks]

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Answer

11 (a) Write down the value of 10^3

[1 mark]

.....

Answer

11 (b) Work out the value of 0.4×0.2

[1 mark]

.....

Answer

10

Turn over ►



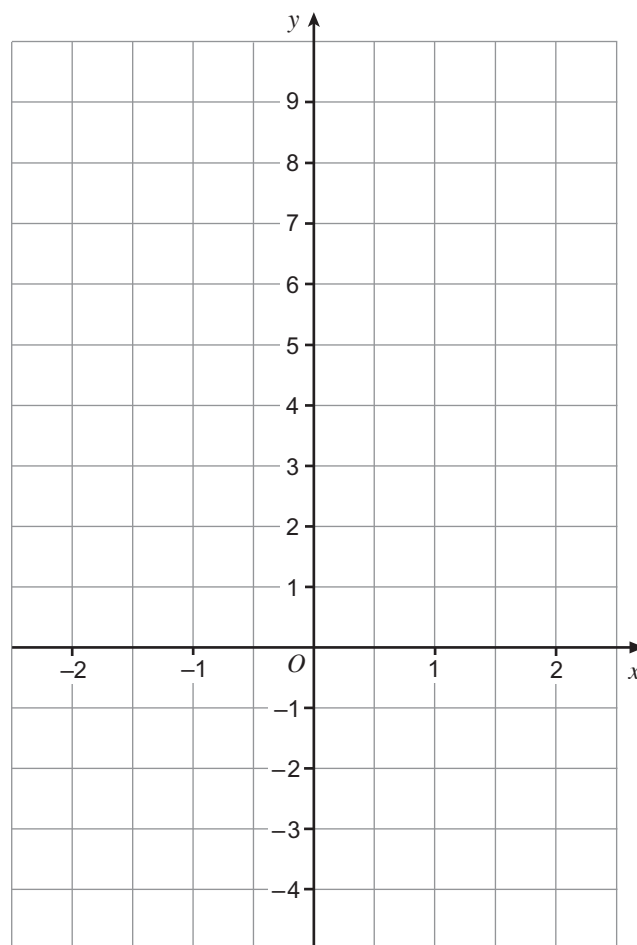
12 (a) Complete the table of values for $y = 3x + 2$

x	-2	-1	0	1	2
y		-1		5	

[2 marks]

12 (b) On the grid draw the graph of $y = 3x + 2$ for values of x from -2 to 2

[2 marks]



12 (c) Work out the gradient of the line $y = 3x + 2$

[1 mark]

Answer



13 There are 32 packets of crisps in a box.
 Millie buys 5 boxes for a total of £48

She sells 140 packets for 40p each.
 She then sells the rest of the packets at a reduced price.

She makes a total profit of £13.80

Work out the reduced price of each packet.
 You **must** show your working.

[5 marks]

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Answer pence

Turn over for the next question

10

Turn over ►



14 (a) Factorise $x^2 + x$ **[1 mark]**

.....

Answer

14 (b) Work out the value of $x^2 + x$ when $x = -3$ **[2 marks]**

.....

Answer

***14 (c)** n is an **odd** number.

Tick the correct statement.

$n^2 + n$ is always odd

$n^2 + n$ is always even

$n^2 + n$ could be odd or even

Give a reason for your answer. **[2 marks]**

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.....



***15** Dipen and Nisha are planning their wedding reception.

£40 per guest
Total reduced by 5% with over 60 guests

Nisha says, "I want to invite 70 guests."

Dipen says, "If we invite one-fifth fewer guests, we will save more than £500"

Is Dipen correct?
You **must** show your working.

[6 marks]

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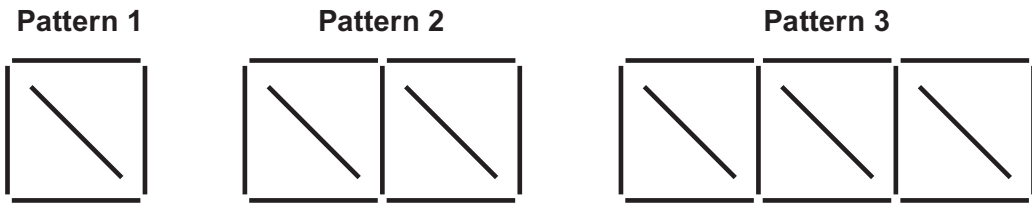
Answer

11

Turn over ►



16 This sequence of patterns is made using sticks.



16 (a) Complete the table for Pattern 4 and Pattern 5

Pattern	1	2	3	4	5
Number of sticks	5	9	13		

[1 mark]

16 (b) Work out the n th term of the sequence 5 9 13

[2 marks]

.....

Answer

16 (c) Which pattern is made using 53 sticks?

[2 marks]

.....

Answer



17 Expand and simplify $3(2x + 5) - 2(x - 4)$

[3 marks]

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Answer

Turn over for the next question

8

Turn over ►



18 (a) Solve $5x - 11 \geq 29$

[2 marks]

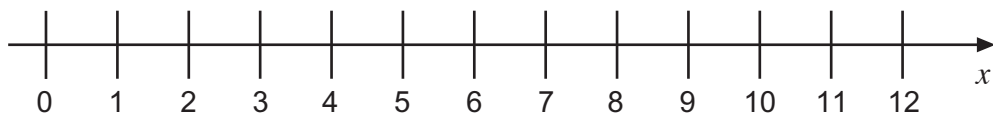
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Answer

18 (b) Show the solution of $3x < 12$ on the number line.

[2 marks]

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END OF QUESTIONS

