Write your name here

Surname	Other Names

Mathematics

June 2017 Paper 3 (Calculator Allowed)
Part 1 (First half of the paper)
Edexcel Foundation Tier

Time: 45 minutes

Q	Topic	Max Mark	My Marks
1	Ordering Numbers	2	
2	Writing an Expression	2	
3	Place Value	2	
4	Fraction of Amount (Reverse)	2	
5	Writing Ratio, Fraction of Amount	3	
6	Averages and Range	5	
7	Systematic Listing	2	
8	Calculation (Money) Problems	2	
9	Time	3	
10	Sharing Ratio/ Forming and Solving Equations	3	
11	Substitution, Changing the Subject	4	
12	Volume and Surface Area	5	
13	Angles, Forming and Solving Equations	5	
	Total	40	

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1   The table shows the lengths of five rivers.

River	Length (km)
Trent	297
Don	112
Severn	354
Thames	346
Mersey	113

(a) Write down the rivers in order of length.

Start with the shortest river.

....

....

(1)

Ami says,

"The River Thames is more than three times as long as the River Don."

(b) Show that Ami is correct.

....

....

(1)

(Total for Question 1 is 2 marks)

2 Cups are sold in packs and in boxes.

There are 12 cups in each pack.
There are 18 cups in each box.

Alison buys *p* packs of cups and *b* boxes of cups.

Write down an expression, in terms of *p* and *b*, for the total number of cups Alison buys.

....

(Total for Question 2 is 2 marks)

3 Here are four digits.

<div align="center">5   6   1   9</div>

(i) Write down the smallest possible two digit number that can be made with two of the digits.

....

(1)

(ii) Write down the three digit number closest to 200 that can be made with three of the digits.

....

(1)

(Total for Question 3 is 2 marks)

4 $\frac{4}{5}$ of a number is 32

Find the number.

....

(Total for Question 4 is 2 marks)

5 A path is made of white tiles and grey tiles.

$\frac{1}{4}$ of the tiles are white.

(a) Write down the ratio of white tiles to grey tiles.

....

(1)

There is a total of 56 tiles.

(b) Work out the number of grey tiles.

....

(2)

(Total for Question 5 is 3 marks)

6 Here is a list of numbers.

$$12 \qquad 15 \qquad 14 \qquad 17 \qquad 22 \qquad 19 \qquad 13$$

Bridgit says,

"To work out the median you find the middle number, so the median of these numbers is 17"

Bridgit's answer is **not** correct.

(a) What is wrong with Bridgit's method?

....

....

(1)

(b) Work out the range of the numbers in the list.

....

(2)

(c) Work out the mean of the numbers in the list.

....

(2)

(Total for Question 6 is 5 marks)

7 Priti is going to have a meal.
She can choose one starter and one main course from the menu.

Menu	
Starter	**Main Course**
Salad	Pasta
Fish	Rice
Melon	Burger

Write down all the possible combinations Priti can choose.

....

....

....

(Total for Question 7 is 2 marks)

8 Joanne wants to buy a dishwasher.

The dishwasher costs £372

Joanne will pay a deposit of £36
She will then pay the rest of the cost in 4 equal monthly payments.

How much is each monthly payment?

£...

(Total for Question 8 is 2 marks)

9 Davos is a cleaner.

The table shows information about the time it will take him to clean each of four rooms in a house.

Room	Time
Kitchen	2 hours
Sitting room	1 hour 40 minutes
Bedroom	$1\frac{1}{2}$ hours
Bathroom	45 minutes

Davos wants to clean all four rooms in one day.
He will have breaks for a total time of 75 minutes.

Davos is going to start cleaning at 9 am.

Will he finish cleaning by 4 pm?
You must show all your working.

(Total for Question 9 is 3 marks)

10 *ABC* is a straight line.

The length *AB* is five times the length *BC*.
AC = 90 cm.

Work out the length *AB*.

....cm

(Total for Question 10 is 3 marks)

11 $T = 4v + 3$

(a) Work out the value of *T* when $v = 2$

$T = $ ....

(2)

(b) Make *v* the subject of the formula $T = 4v + 3$

....

(2)

(Total for Question 11 is 4 marks)

12 The diagram shows a cube of side length 2 cm.

2 cm

2 cm

2 cm
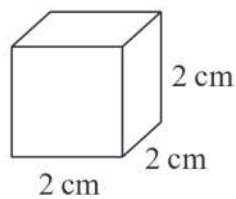
Vera says,

"The volume of any solid made with 6 of these cubes is 48 cm³"

(a) Is Vera correct?
You must show your working.

....

....

(2)

(b) (i) Draw a cuboid that can be made with 6 of these cubes.
Write the dimensions of the cuboid on your diagram.

(1)

(ii) Work out the surface area of your cuboid.

....cm²

(2)

(Total for Question 12 is 5 marks)

13 The size of the largest angle in a triangle is 4 times the size of the smallest angle.
The other angle is 27° less than the largest angle.

Work out, in degrees, the size of each angle in the triangle.
You must show your working.

.... ° , ... ° , ... °

(Total for Question 13 is 5 marks)