Mathematics
November 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	Rounding	1	
2	Simplifying Algebra	1	
3	Factors	2	
4	Calculation Problems (Money), Time	5	
5	Metric Conversions	3	
6	Pictograms	3	
7	Angles in a Triangle, Types of Triangle	4	
8	Scale Drawings	2	
9	Prime Numbers, Square Numbers	2	
10	Fraction of Amount (Reverse)	2	
11	Percentage Decrease, Best Buy	3	
12	Direct Proportion	2	
13	Drawing Linear Graphs	5	
14	Transformations	2	
15	Ratio, Direct Proportion	3	
	Total	40	

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1   Write 3758 correct to the nearest 1000

....

(Total for Question 1 is 1 mark)

2   Simplify $y + 3y - 2y$

....

(Total for Question 2 is 1 mark)

3   Write down all the factors of 18

....

(Total for Question 3 is 2 marks)

4 The table gives information about the prices of cinema tickets.

Cinema ticket	Price
adult ticket	£7.80
child ticket	£5.80
family ticket (for 4 people)	£24.30

Mr Edwards and his 3 children go to the cinema.

It is cheaper for Mr Edwards to buy 1 family ticket rather than 4 separate tickets.

(a) How much cheaper?

....

(3)

The film starts at 6.45 pm.
The film lasts 102 minutes.

(b) What time does the film finish?

....

(2)

(Total for Question 4 is 5 marks)

5 Thais has a large bottle of shampoo.
There are 2 litres of shampoo in the large bottle.

Thais also has some empty small bottles.
Each small bottle can be completely filled with 150 m*l* of shampoo.

How many small bottles can be completely filled with shampoo from the large bottle?

....

(Total for Question 5 is 3 marks)

6 The incomplete pictogram shows information about the number of cycles sold in a shop
on Tuesday, on Wednesday and on Thursday.

Tuesday	
Wednesday	
Thursday	
Friday	
Saturday	

Key:

A total of 20 cycles were sold on Tuesday, Wednesday and Thursday.
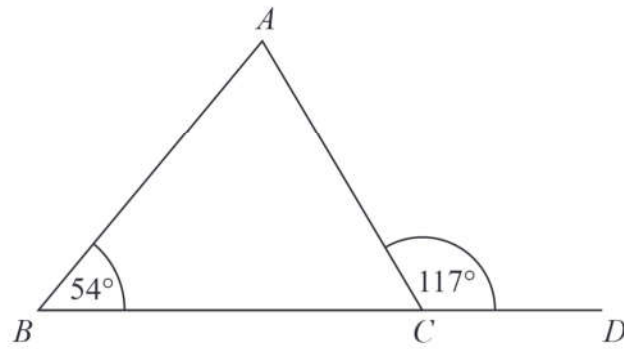
8 cycles were sold on Friday.
15 cycles were sold on Saturday.

Use this information to complete the pictogram.

(Total for Question 6 is 3 marks)

7
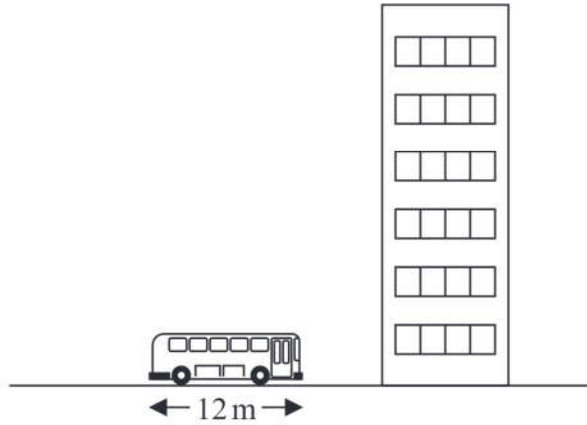

BCD is a straight line.
ABC is a triangle.

Show that triangle *ABC* is an isosceles triangle.
Give a reason for each stage of your working.

(Total for Question 7 is 4 marks)

8

$\leftarrow$ 12 m $\rightarrow$

The picture shows a bus next to a building.
The bus has a length of 12 m.

The bus and the building are drawn to the same scale.

Work out an estimate for the height, in metres, of the building.

.... m

(Total for Question 8 is 2 marks)

P 4 9 3 8 6 A 0 6 2 0

9 Nidah writes down two different prime numbers.

She adds together her two numbers.
Her answer is a square number less than 30

Find two prime numbers that Nidah could have written down.

.... , ...

(Total for Question 9 is 2 marks)

10 Jim thinks of a number.

$\frac{2}{3}$ of Jim's number is 48

Work out $\frac{5}{6}$ of Jim's number.

....

(Total for Question 10 is 2 marks)

11 Jack's driving school has two offers.

Offer 1	Offer 2
First driving lesson free	All driving lessons
All other driving lessons normal price	5% off the normal price

The normal price of a driving lesson is £24

Douglas is going to have 12 driving lessons.

Which is the cheaper offer for 12 driving lessons, Offer 1 or Offer 2?
You must show how you get your answer.

(Total for Question 11 is 3 marks)

12 2.5 kg of apples cost £3.60

Work out the cost of 3.5 kg of apples.

£.......................................

(Total for Question 12 is 2 marks)

13 (a) Complete the table of values for $y = \frac{1}{2}x - 1$

x	-2	-1	0	1	2	3
y	-2				0	

(2)

(b) On the grid, draw the graph of $y = \frac{1}{2}x - 1$ for values of x from -2 to 3
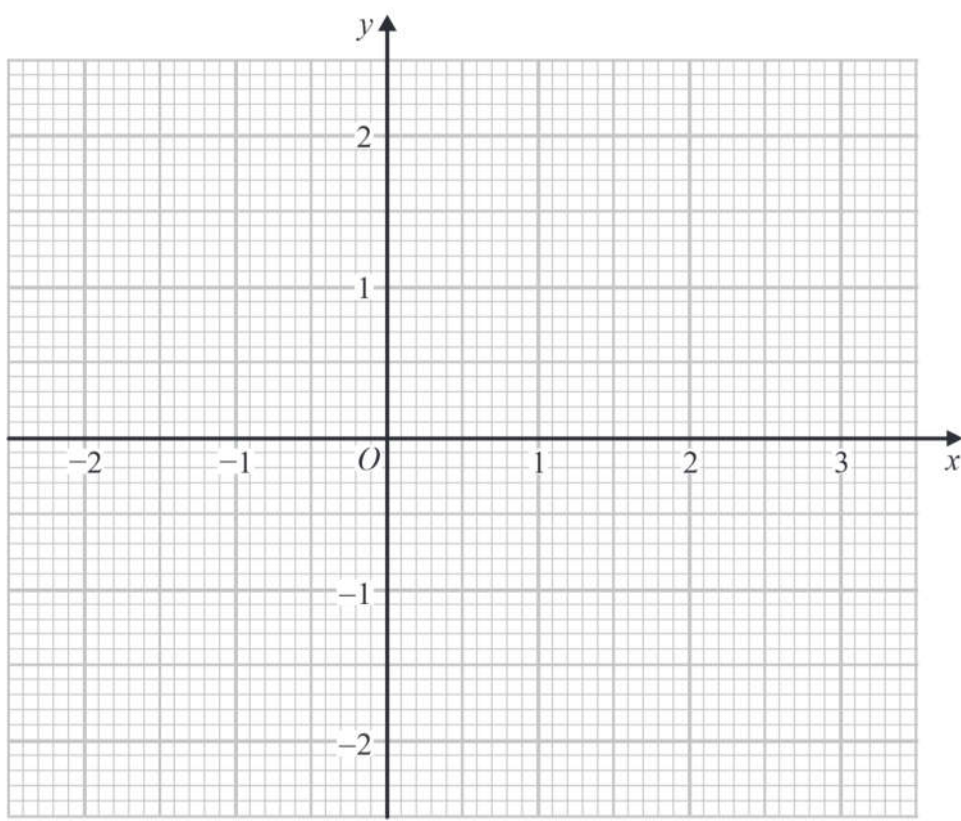
(2)

(c) Use your graph to find the value of x when $y = 0.3$

$x =$ ....

(1)

(Total for Question 13 is 5 marks)

14
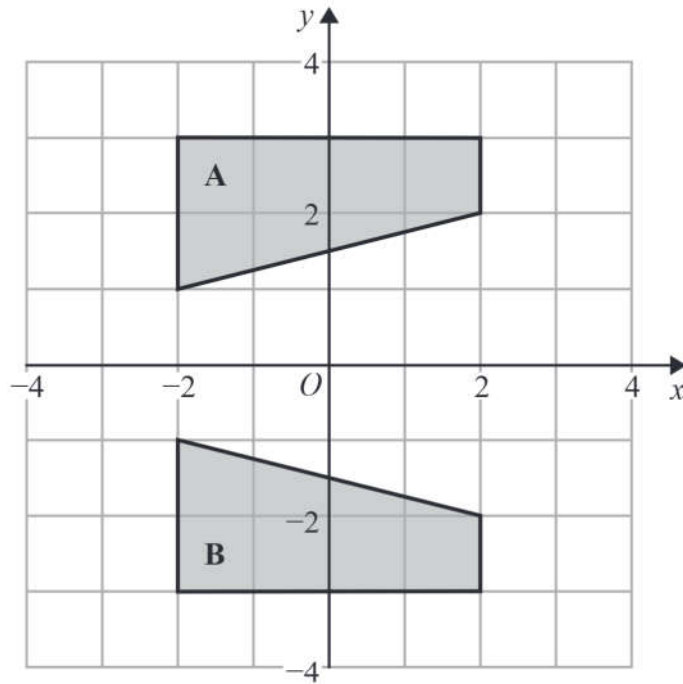
Describe fully the single transformation that maps shape **A** onto shape **B**.

....

(Total for Question 14 is 2 marks)

15 The ratio of the cost of one metre of cotton fabric to the cost of one metre of silk fabric is 2 : 5

Complete the table of costs.

	2 m	6 m	8 m	9 m
cotton fabric	£6			
silk fabric				

(Total for Question 15 is 3 marks)

P 4 9 3 8 6 A 0 1 0 2 0