

Write your name here

Surname

Other Names

# Mathematics

**November 2018 Paper 3 (Calculator Allowed)**  
**Part 1 (First half of the paper)**  
**Edexcel Foundation Tier**

Time: 45 minutes

Q	Topic	Max Mark	My Marks
1	Solving Equations	2	
2	Fractions, Decimals and Percentages	1	
3	Powers and Roots	1	
4	Fraction of Amount	1	
5	Shapes	2	
6	The Probability Scale	2	
7	Metric Conversions	2	
8	Calculation (Money) Problems	4	
9	Shapes, Congruent Shapes	2	
10	Transformation, Reflection	1	
11	Reverse Percentages	3	
12	Pie Charts	3	
13	Calculation (Money) Problems	4	
14	Probability and Relative Frequency	4	
15	Multiples, LCM	3	
16	Writing and Simplifying Ratio	2	
17	Forming and Solving Equations	5	
	Total	42	

For worked solutions and video solutions visit [mathsgenie.co.uk](http://mathsgenie.co.uk)

Answer ALL questions.

Write your answers in the spaces provided.

You must write down all the stages in your working.

1 Write a number in each box to make the calculation correct.

(i)  $56.3 + \boxed{\text{.....}} = 100$  (1)

(ii)  $\frac{2}{7} + \boxed{\text{.....}} = 1$  (1)

(Total for Question 1 is 2 marks)

2 Write 3% as a fraction.

.....  
(Total for Question 2 is 1 mark)

3 Find  $\sqrt{1.44}$

.....  
(Total for Question 3 is 1 mark)

4 Work out  $\frac{1}{8}$  of 720

.....  
(Total for Question 4 is 1 mark)

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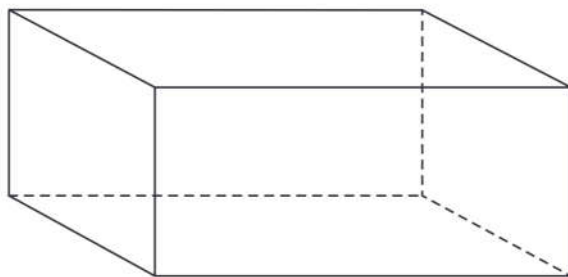


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5 Here is a 3-D shape.



(a) Write down the name of this 3-D shape.

.....  
(1)

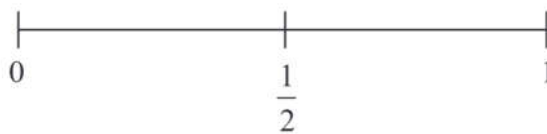
(b) Write down the number of edges of this 3-D shape.

.....  
(1)

**(Total for Question 5 is 2 marks)**

6 An ordinary fair dice is thrown once.

(a) On the probability scale below, mark with a cross (×) the probability that the dice lands on an odd number.



(1)

(b) Write down the probability that the dice lands on a number greater than 4

.....  
(1)

**(Total for Question 6 is 2 marks)**



7 Shaun is 1.88 m tall.

David is 6 cm taller than Shaun.

How tall is David?

(Total for Question 7 is 2 marks)

8 2 pens cost £2.38  
5 folders cost £5.60

Ben wants to buy 20 pens and 20 folders.  
He only has £50

Does Ben have enough money to buy 20 pens and 20 folders?  
You must show how you get your answer.

(Total for Question 8 is 4 marks)

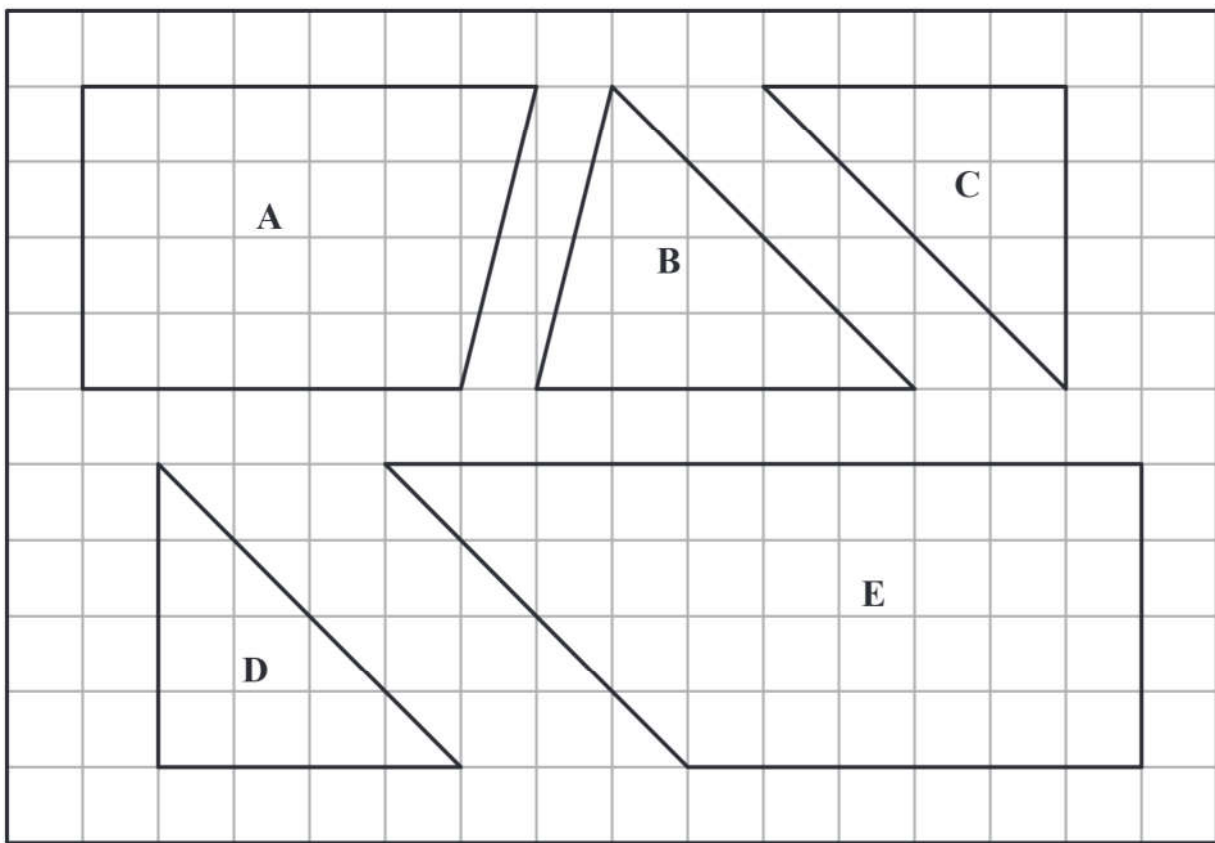


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9 The diagram shows five shapes on a centimetre grid.



(a) Write down the name of shape E.

.....  
(1)

Two of the shapes are congruent.

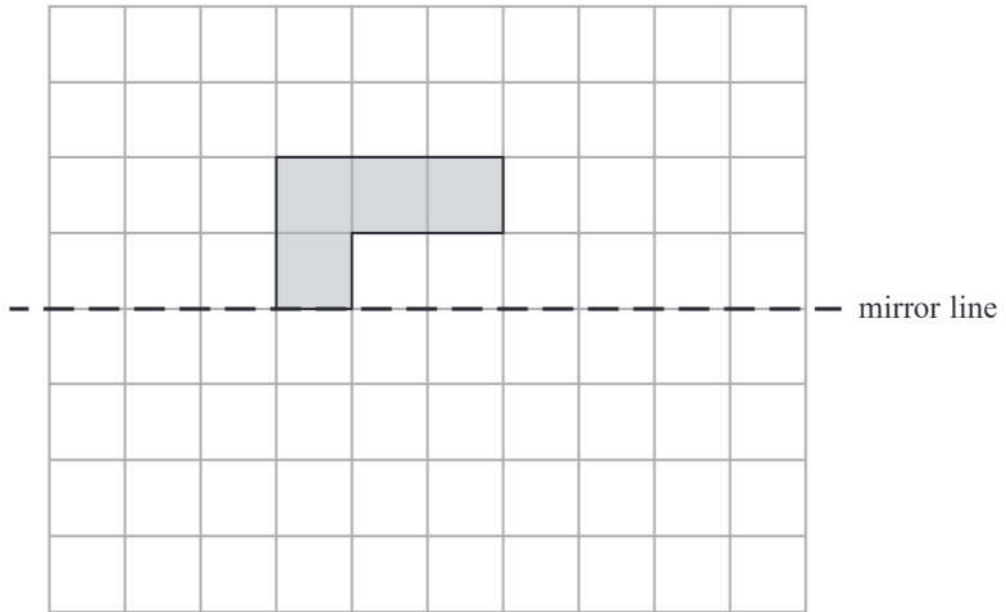
(b) Write down the letters of these two shapes.

..... and .....  
(1)

**(Total for Question 9 is 2 marks)**



10 On the grid, reflect the shaded shape in the mirror line.



(Total for Question 10 is 1 mark)

11 There are men and women at a meeting.

There are 28 women.

30% of the people at the meeting are men.

Work out the total number of people at the meeting.

(Total for Question 11 is 3 marks)



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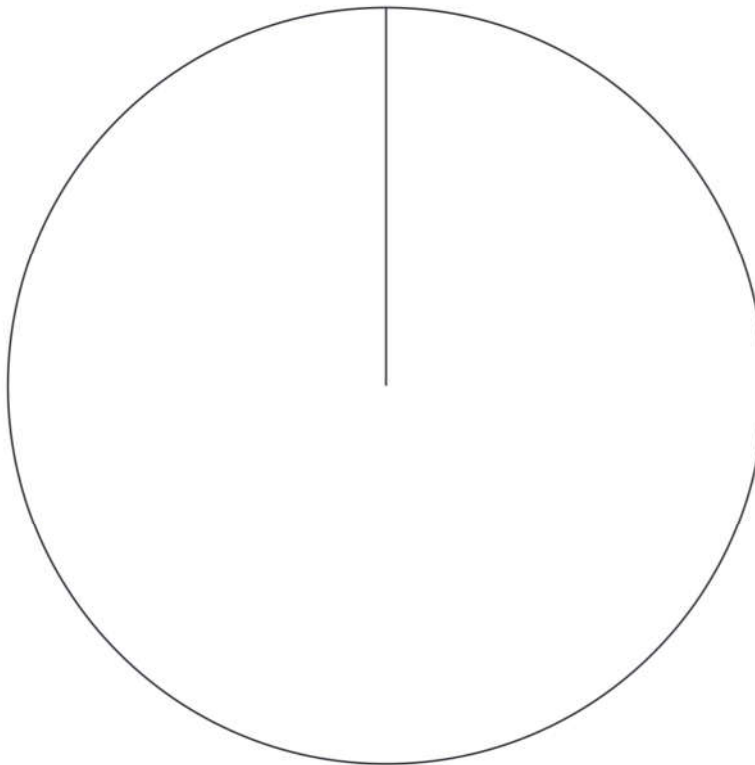
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12 Joan asked each of 60 people to name their favourite vegetable.

Here are her results.

Vegetable	Frequency
Peas	24
Carrots	16
Mushrooms	20

Draw an accurate pie chart for her results.



(Total for Question 12 is 3 marks)



**13** Annie sold

45 books at £1.20 each  
34 candles at £1.50 each  
some calendars at 90p each

She got a total of £150

Work out how many calendars Annie sold.

.....  
**(Total for Question 13 is 4 marks)**

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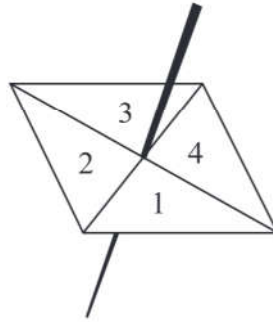
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14 Here is a 4-sided spinner.



The table shows the probabilities that when the spinner is spun it will land on 1, on 3 and on 4

<b>Number</b>	1	2	3	4
<b>Probability</b>	0.2		0.4	0.1

The spinner is spun once.

(a) Work out the probability that the spinner will land on 2

.....  
(1)

(b) Which number is the spinner least likely to land on?

.....  
(1)

Jake is going to spin the spinner 60 times.

(c) Work out an estimate for the number of times the spinner will land on 1

.....  
(2)

(Total for Question 14 is 4 marks)



- 15** Bert has 100 cards.  
There is a whole number from 1 to 100 on each card.  
No cards have the same number.

Bert puts a star on every card that has a multiple of 3 on it.  
He puts a circle on every card that has a multiple of 5 on it.

Work out how many cards have both a star and a circle on them.

.....  
(Total for Question 15 is 3 marks)

- 16** Write down the ratio of 450 grams to 15 grams.  
Give your answer in its simplest form.

.....  
(Total for Question 16 is 2 marks)

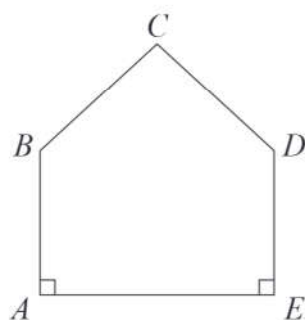


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- 17 The diagram shows a pentagon.  
The pentagon has one line of symmetry.



$$AE = 4x$$
$$AB = 2x + 1$$
$$BC = x + 2$$

All these measurements are given in centimetres.

The perimeter of the pentagon is 18 cm.

- (a) Show that  $10x + 6 = 18$

(3)

- (b) Find the value of  $x$ .

$$x = \dots\dots\dots$$

(2)

(Total for Question 17 is 5 marks)

