Non Calculator Section

1 There are 40 counters in a bag. 24 are red, 6 are yellow and the rest are blue. A counter is chosen at random. State the probability (in its simplest form) that the counter is:

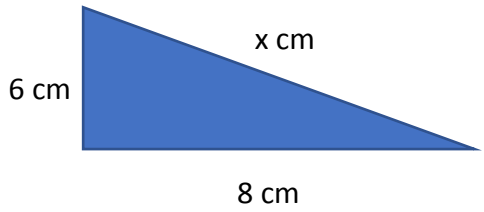


a) Red
b) Red or blue
c) Black

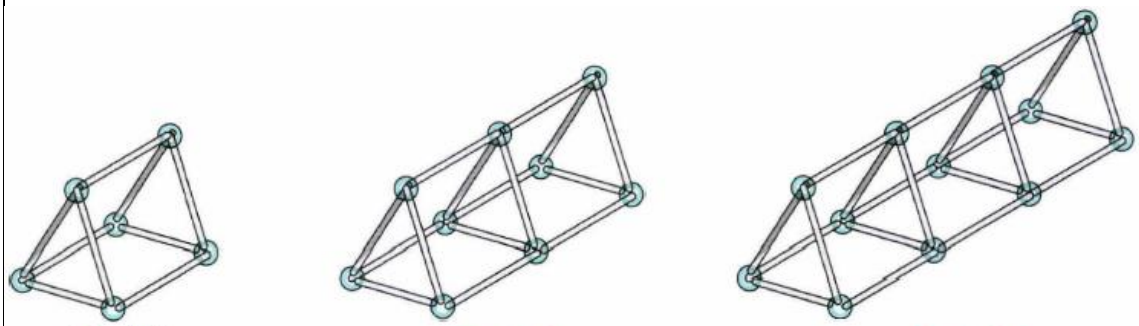
2. State the ratio of Red: Yellow: Blue in its simplest form

3. Share £36 in the ratio 5 : 7

4. Find the value of x in this right-angled triangle



5.



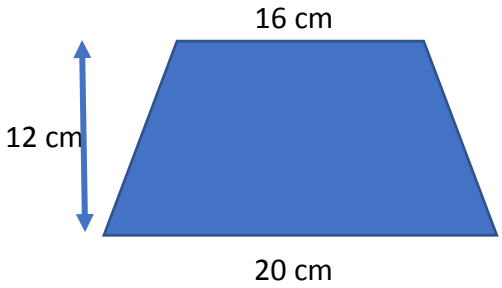
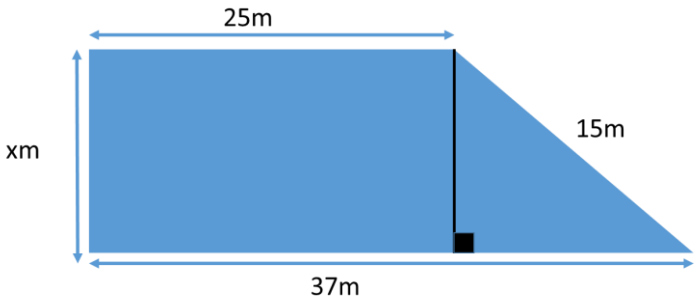
a) Copy and complete the table:

Model Number (M)	1	2	3	4
Number of Rods (R)				
Number of Spheres (S)				

b) Create a formula for the number of rods for the model number
Ie R = … x M + ….

c) Create a formula for the number of sphere for the model number

d) Use your formulae to find the number of rods and number of spheres for the 50^{th} model number

	Calculator Section	
1.	Here is a list of ingredients for making 10 Flapjacks. Work out the amount of each ingredient needed to make 15 Flapjacks. **Ingredients for 10 Flapjacks** 80 g rolled oats 60 g butter 30 m*l* golden syrup 36 g light brown sugar	
2.	Find the area of this trapezium:  	
3.	This shape consists of a rectangle and a right-angled triangle. a) Using Pythagoras' Theorem, find the size of x b) Hence find the area of the shape  	
	End of Paper	

Answers Non Calculator

1. a) P(Red) = 3/5 b) P(red or blue) = 17/20 c) P(black) = 0
2. 12 : 3: 5
3. £15 : £21
4. 10cm
5. a)

Model Number (M)	1	2	3	4
Number of Rods (R)	9	15	21	27
Number of Spheres (S)	6	9	12	15

a) R = 6x M + 3
b) S = 3 x M + 3
c) Rods = 303 Spheres = 153

Answers Calculator Section

1. a) 80g Rolled Oats, 90g butter, 45ml golden syrup, 54 g light brown sugar
2. 216cm²
3. a) 9cm b)279 cm²