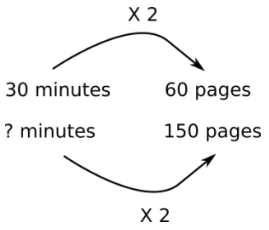
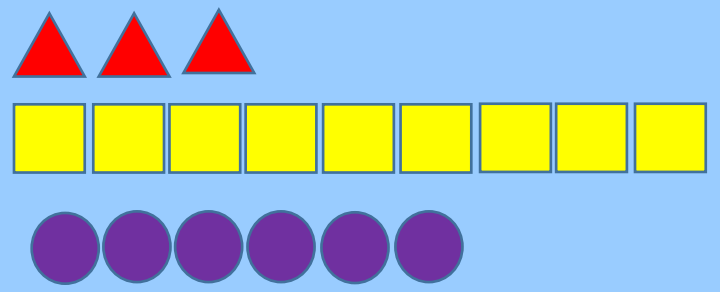
Year 7 Spring Term Ratio and Proportion

Ratio compares the size of one part to another part.	3 : 1 
Proportion compares the size of one part to the size of the whole. Usually written as a fraction	In a class with 13 boys and 9 girls, the proportion of boys is 13/22 and the proportion of girls id 9/22
Simplifying Ratios – Divide all parts of the ratio by a common factor.	5 : 10 = 1 : 2 (divide both by 5) 14 : 21 = 2 : 3 (divide both by 7)
Sharing in a ratio – 1. Add the total parts of the ratio. 2. Divide the total amounts to be shared by this value to find the value of one part. 3. Multiply this value by each part of the ratio Use only if you know the total.	Share £60 in the ratio 3 : 2 : 1. 3 + 2 + 1 = 6 60 ÷ 6 = 10 3 x 10 = 30, 2 x 10 = 20, 1 x 10 = 10 £30 : £20 : £10
Proportional Reasoning. Compare two things using multiplicative reasoning ad applying this to a new situation. Identify one multiplicative link and use this to find missing quantities.	
Finding the **value of a single unit** and then finding the necessary value by **multiplying** the single unit value.	3 cakes need 450g of sugar to make. Find out how much sugar is needed to make 5 cakes. 3 cakes = 450g So1 cake = 150g (450÷ by 3) So 5 cakes =750g (150 x 5)
Best buys. Find the cost of 1 (unit cost) by dividing the price by the quantity. The lowest number is the best value.	8 cakes for £1.28 or 13 cakes for £2.05 £1.28 ÷8 = 16p each £2.05 ÷13 = 15.8p so the pack of 13 cakes is the best value.

Simplifying



Triangle : Square : Circle

3 : 9 : 6

÷ 3 ↓

1 : 3 : 2

Dividing in a given ratio

Divide £64 in the ratio 3:5

3 : 5 = 8 parts in total.

So £64 ÷8 = £8 so each part is worth £8

So 3 parts = 3 x £8 = £24

5 parts = 5 x £8 = £40