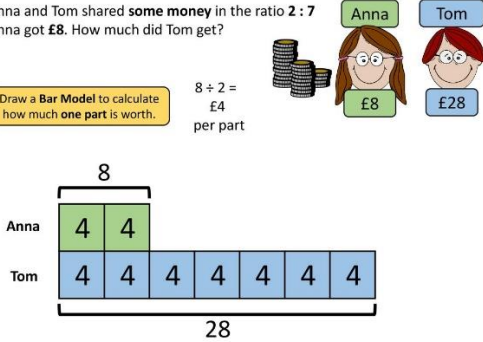
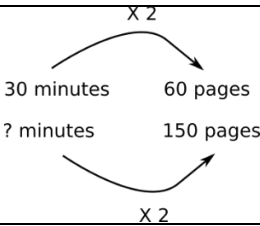


Topic: Ratio and Proportion Year 7

Topic/Skill	Definition/Tips	Example
Ratio	Ratio compares the size of one part to another part . Written using the ':' symbol.	$3 : 1$ 
Proportion	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 $\frac{13}{22}$ and the proportion of girls is $\frac{9}{22}$
Representing a ratio on a bar model	A bar model can be used to represent a ratio. Label each part, the total, differences and use it to find the value of one part.	Anna and Tom shared some money in the ratio 2 : 7 Anna got £8. How much did Tom get? Draw a Bar Model to calculate how much one part is worth. $8 \div 2 =$ £4 per part 
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)
Writing a ratio as a fraction	To write a part of a ratio as a fraction add the parts to get the total. That is the denominator. The ratio number is the numerator.	The ratio of cats to dogs is 3 : 7. What fraction are cats? Total = $3 + 7 = 10$ Fraction of cats = $\frac{3}{10}$
Sharing in a Ratio	Add the total parts of the ratio. Divide the amount to be shared by this value to find the value of one part. Multiply this value by each part of the ratio. Use only if you know the total.	Share £60 in the ratio 3 : 2 : 1. $3 + 2 + 1 = 6$ $60 \div 6 = 10$ $3 \times 10 = 30, 2 \times 10 = 20, 1 \times 10 = 10$ $\pounds 30 : \pounds 20 : \pounds 10$
Proportional Reasoning	Comparing two things using multiplicative reasoning and applying this to a new situation. Identify one multiplicative link and use this to find missing quantities.	
Unitary Method	Finding the value of a single unit and then finding the necessary value by multiplying the single unit value.	3 cakes require 450g of sugar to make. Find how much sugar is needed to make 5 cakes. 3 cakes = 450g So 1 cake = 150g ($\div$ by 3) So 5 cakes = 750 g ($\times$ by 5)

Ratio already shared	Find what one part of the ratio is worth using the unitary method .	Money was shared in the ratio 3:2:5 between Ann, Bob and Cat. Given that Bob had £16, found out the total amount of money shared. £16 = 2 parts So £8 = 1 part 3 + 2 + 5 = 10 parts, so 8 x 10 = £80
Where else is the Ratio and Proportion topic used: Angles Measures Probability Fractions, decimals and percentages Algebra Data handling		Links to other subjects: