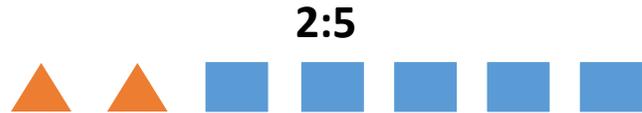


RATIO

This is used to compare two or more amounts
Always draw boxes when dealing with ratio!

Writing a Ratio

The amount of one object compared with another. Eg there are 2 triangles to 5 squares



Simplifying a Ratio [Video 269](#)

You simplify a ratio by dividing the numbers by the HCF (Highest Common Factor)

Simplify 6:12

Divide both by 6

1:2

Simplify 3:9:15

Divide all numbers by 3

1:3:5

Simplify 6:1.5

Multiply both sides by 2

12:3

Divide both sides by 3

4:1

Ratio and Proportion

Sharing an Amount in a Ratio

[Video 270](#)

Mr Musson and Mr Coren get £72 pocket money.
They share it in the ratio 5:3.

Draw a total of 8 boxes ($5 + 3 = 8$)
Split the money evenly between each box ($72 \div 8 = 9$)

Mr Musson gets 5 boxes = $5 \times 9 = £45$
Mr Coren gets 3 boxes = $3 \times 9 = £27$

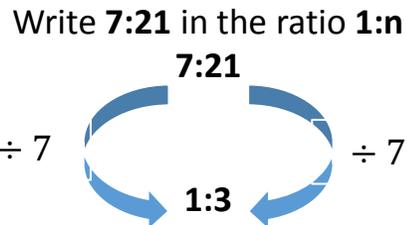
£45 for Mr Musson £27 for Mr Coren



£72 in total

Writing in the Ratio 1:n

You need to divide **both** sides by the **same** amount until the correct number is down to 1



PROPORTION

Proportion compares a part with a whole



[Video 210](#)

Best Buy

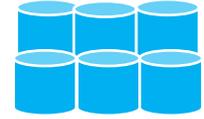
Video

This is about finding which item is better *value for money*

Example 1



A pack of 4 tins of baked beans cost £1.96



A pack of 6 tins of baked beans cost £3

Hint: Find the cost of one tin from each pack

$$\begin{aligned} £1.96 \div 4 &= £0.49 \\ &= 49p \text{ per tin} \end{aligned}$$

$$\begin{aligned} £3 \div 6 &= £0.50 \\ &= 50p \text{ per tin} \end{aligned}$$

Therefore the pack of 4 tins is better value for money

Example 2

Radox hand wash is on sale at Boots and Superdrug

Boots
500ml bottle costs £2.24

Superdrug
200ml bottle costs 90p

Hint: multiply both to the same amount of hand wash

$$\begin{aligned} \times 2 \quad & \begin{array}{l} 500\text{ml} = £2.24 \\ 1000\text{ml} = £4.48 \end{array} \quad \times 2 \end{aligned}$$

$$\begin{aligned} \times 5 \quad & \begin{array}{l} 200\text{ml} = 90p \\ 1000\text{ml} = £4.50 \end{array} \quad \times 5 \end{aligned}$$

Therefore the bottle from boots is better value for money

This is an example of DIRECT PROPORTION