## Mathematics

| Ratio |
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| Ratio - a part to part comparison <br> The ratio of $a$ to $b$ is written as $a: b$ (said as " $a$ to $b$ ") |

: is called a colon.

Unit ratio - A ratio in the form $\mathbf{n}: \mathbf{1}$ or $\mathbf{1 : n}$ (where one side of the ratio is equal to 1 e.g. 1:3 or 5:1)

Simplify - Find an equivalent ratio which contains smaller integers e.g. 3:12 can be simplified to 1:4

Numerator - The top number in a fraction. It tells us how many parts we have.

Denominator - The bottom number in a fraction. It shows how many parts the item has been split into.

Unit fractions - have a numerator of 1 e.g. $\frac{1}{4}$

## Proportion <br> Similarity

Proportion - When two ratios or fractions are equivalent.

Double - To multiply by 2.

Triple - To multiply by 3.

Rate - A ratio that compares quantities that have different units. For example:
Exchange rate - Compare quantities with different currencies.

Currency - The money used by a country.

Linear - Linear graphs form a straight line.

Convert - To change between different units.

Units - Used as a standard of measurement e.g. centimetres.

Approximate - Not exact but quite close.

Origin - $(0,0)$

When one shape is an enlargement of another then the two shapes are similar.

Similar shapes - Have corresponding sides proportional and corresponding angles are equal.

Corresponding sides - Sides in the same position on two similar shapes.

Scale factor - A multiplier which indicates how much a shape is enlarged by e.g. the scale factor below is 3:


