Ratio and proportion key words

Ratio is a way in which quantities can be **divided** or **shared**.

Example
Share £20 between 2 people in a **ratio** of **3:1**.

A ratio of 3 + 1 = 4 parts, so the money needs to be divided into 4 parts.
20 ÷ 4 = £5

If 1 person is getting 3 parts they will have 3 × 5 = **£15**
The other person will have 1 part, **£5**.

Simplest form: ratios can be **simplified** by finding **common factors**.

Direct proportion: ratios are in direct proportion when they **increase or decrease in the same ratio**.

Equivalent ratios: this is when both sides of a ratio can be **multiplied or divided by the same number** to give an equivalent ratio.

Example
There are 15 males and 12 females in a group. What is the **ratio** of males to females? Give your example in its **simplest form**.

So the ratio of males to females is **15:12**. However, both sides of the ratio can be divided by 3. Dividing 15 and 12 by 3 gives 5:4.
5:4 is the ratio in its **simplest form**.
5:4 and 15:12 are **equivalent ratios**.

Factor
The factors of a number are those numbers that **divide into it exactly**.

Example
1 × 12 = 12
2 × 6 = 12
3 × 4 = 12

So the factors of 12 are **1, 2, 3, 4, 6 and 12.**