A fraction compares a selected number of parts to the total number of parts in a whole.
\[
\frac{4}{10} \quad \text{parts to total}
\]

A ratio compares a selected number of parts to the number of other parts in the whole.

\[
4:6 \quad \text{parts to parts}
\]

A ratio can be written as:

\[
\frac{4}{6} \quad \text{or} \quad 4:6 \quad \text{or} \quad \frac{4}{6}
\]

The numbers in a ratio are called terms.
A ratio may have more than two terms, e.g. 4:5:3:1

Simplifying a ratio.

Just like simplifying a fraction, a ratio is simplified by finding the highest common factor (HCF or GCF) to divide each term.

EXAMPLE:

\[
4:6 = 2:3 
\]

both terms divided by 2

Writing ratios as fractions.

Each term in a ratio can be written as a fraction of the total parts.

\[
\frac{2}{5} \quad \frac{3}{5}
\]

When comparing two terms in a ratio, each term can be written as a fraction of the other.

\[
2 = \frac{2}{3} \times 3 \quad 3 = \frac{3}{2} \times 2
\]