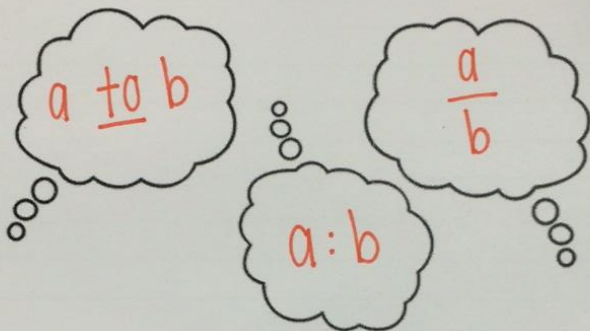


A Ratio is a Comparison of 2 or more quantities by division.

A ratio can be written in three ways.



Example: Compare the number of circles to squares in this picture using the 3 ways mentioned above: $\square \bigcirc \bigcirc \square \bigcirc \bigcirc$ C:S

$\frac{4:2}{2:1}$ $\frac{4 \text{ to } 2}{2 \text{ to } 1}$ $\frac{4}{2} \text{ OR } \frac{2}{1}$

The number of circles comes first, because it was the first thing asked to compare.

Ratios can compare Part to Part
Part to Whole
Whole to Part

Equivalent Ratios - Ratios that describe the same comparison. You can find equivalent ratios by multiplying or dividing both terms by the same number.

Examples:

$$\begin{array}{l} 12:2 \\ \div 2 \quad \div 2 \\ 6:1 \end{array}$$

$$\begin{array}{l} \frac{2 \times 2}{3 \times 2} \quad \frac{4}{6} \end{array}$$

$$\begin{array}{l} 12 \text{ to } 16 \\ 6 \text{ to } 8 \\ \div 2 \quad \div 2 \\ 3 \text{ to } 4 \end{array}$$

Practice:

Use the following table to create ratios.

Pets owned by students	
Dogs	5
Cats	8
Fish	10

- 1.) Dogs to cats D:C $\frac{5:8}{5:8}$
- 2.) Fish to cats f:C $\frac{10:8}{5:4}$
- 3.) Cats to total pets C:T $\frac{8:23}{8:23}$
- 4.) Cats to dogs to fish $\frac{8:5:10}{8:5:10}$
- 5.) Cats and dogs to total pets $\frac{13:23}{C+d:T}$