

Unit 7 Vocabulary and
Big Ideas: Ratios and
Rates with Fractions,
Decimals, and Percents

Compare Ratios: For two ratios, to state whether the amount of one quantity in a ratio is less than, greater than, or equal to the same quantity in the other ratio when the value of the other quantity in the ratios is the same.

Unit Rate Strategy: a strategy in which a table is used to solve proportions.

Example: In this example, the unit rate, $\frac{3}{4}$ or $\frac{3}{4}$ to 1, is used to solve the proportion $3:4 = x:5$.

3	4
$\frac{3}{4}$	1
$\frac{15}{4}$	5

Diagram illustrating the unit rate strategy for solving the proportion $3:4 = x:5$. The table shows the original ratio (3/4), the unit rate ($\frac{3}{4}$ to 1), and the resulting ratio ($\frac{15}{4}$ to 5). Red arrows indicate the unit rate is used to find the unknown value. A pink arrow shows $\frac{3}{4} \times 5 = \frac{15}{4}$. A green arrow shows $1 \times 5 = 5$.

Cross Multiplication: a method used for solving proportions based on the fact that in a proportion, the cross-products are equal.

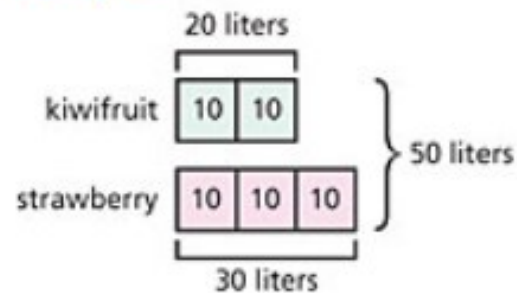
Example: $\frac{10}{15} = \frac{18}{27}$ is a proportion. The cross-products are equal.

$$\frac{10}{15} = \frac{18}{27}$$

$$18 \cdot 15 = 10 \cdot 27$$

Tape Diagram: a drawing that looks like a segment of tape used to illustrate number relationships. Also known as a strip diagram, bar model, fraction strip, or length model.

Example:



Multiplicative Comparison: a

way of comparing two quantities using *as many* or two amounts using *as much*. A multiplicative comparison can be expressed in two ways.

Example: When comparing 2 circles and 6 squares, the comparison can be expressed as:

There are 3 times as many squares as circles.

or

There are $\frac{1}{3}$ as many circles as squares.

Percent:

An amount out of a hundred or per hundred.

Examples: $34\% = \frac{34}{100}$
 $124\% = \frac{124}{100}$

Liquid Volume: a measure of how much
a container can hold. Also called capacity.