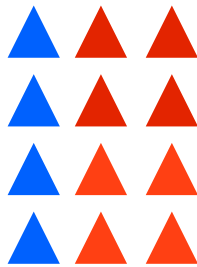


Ratio

A **ratio** is a comparison between two quantities.

What is the ratio of **blue triangles** to **red triangles**?



4 blue triangles 8 red triangles

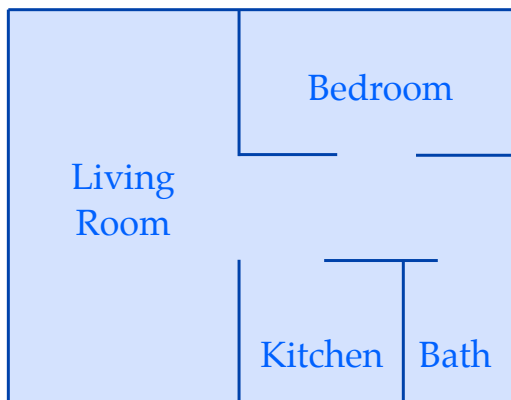
colon

using "to"

fraction

Ratio

A **ratio** is a comparison between two quantities.



Inches
3 in.

Feet
9 ft.

colon

using "to"

fraction

Scale: 3 in. = 9 ft.

Proportion

A **proportion** is a statement that two ratios are equal.

$$\frac{a}{b} = \frac{c}{d}$$

ratio = ratio

proportion

Proportion

To solve a **proportion** cross multiply.

$$\frac{a}{b} = \frac{c}{d}$$

Solve the following proportions

$$\frac{2}{5} = \frac{x-6}{x}$$

Solve the following proportions

$$\frac{4}{x} = \frac{x}{16}$$

Solve the following proportions

$$\frac{x-4}{x-2} = \frac{x-1}{x+7}$$

Given the proportion...

$$\frac{a}{b} = \frac{c}{d}$$

The following are equivalent statements.

$$1) \, ad = bc \qquad 2) \, \frac{b}{a} = \frac{d}{c} \qquad 3) \, \frac{a}{c} = \frac{b}{d} \qquad 4) \, \frac{a+b}{b} = \frac{c+d}{d}$$

Given the proportion...

$$\frac{x}{y} = \frac{2}{7}$$

Create four equivalent statements

1)

cross multiply

2)

flip numerators
with denominators

3)

switch b and c terms

4)

add denominator
value to numerator