



## Proportional Relationships

**Proportional Relationships** involve collections of pairs of measurements in equivalent ratios. Equivalent ratios have the same unit rate.

**Example:** Are the following ratios proportional?

$$\frac{2}{3} \text{ and } \frac{4}{9}$$

$$\frac{2 \rightarrow \times 2}{3 \rightarrow \times 2} = \frac{4}{9} \quad \text{NO}$$

$$\frac{8}{10} \text{ and } \frac{20}{25}$$

$$\frac{8}{10} = \frac{4}{5} \text{ and } \frac{20}{25} = \frac{4}{5} \quad \text{YES}$$

1. Determine whether the ratios  $\frac{2}{5}$  and  $\frac{20}{50}$  are proportional.
  - A. are proportional
  - B. not proportional
  
2. Determine whether the ratios  $\frac{8}{12}$  and  $\frac{10}{18}$  are proportional.
  - A. are proportional
  - B. not proportional

Determine whether the values in each table represent a proportional relationship.

3.

Gallons Used	Miles Travelled
1	36
2	72
4	144
5	180
8	288

4.

Inches on map	Distance In miles
1	90
2	170
3	250
4	330
5	410

5.

Number of baskets	Total Cost
3	\$24
5	\$40
6	\$48
8	\$64
15	\$120

Determine whether the graphs show a proportional relationship.

