

Ratio

A ratio is a comparison of two quantities by division

Equivalent Ratios

Ratios that make the same comparison

Proportion

Ratios that are equivalent

Example:

A. $\frac{9}{27}$ multiply or divide the ratio

$$\frac{9}{27} = \frac{9 \div 9}{27 \div 9} = \frac{1}{3}$$

Two ratios equivalent to

$$\frac{9}{27} \text{ are } \frac{3}{9} \text{ and } \frac{1}{3}$$

We learned that...

A ratio is a comparison between 2 numbers, Equivalent ratios make the same comparison, and a proportion are ratios that are equivalent.

Rate

A comparison of two quantities that have different units

Unit Rate

Rates in which the second quantity is 1

Unit price

Unit rate used to compare costs Per time.

Example

$$A. 4:3 = \frac{4}{3} = \frac{1.3}{1}$$

$$23:10 = \frac{23}{10} = \frac{2.3}{1}$$

$$13:9 = \frac{13}{9} = \frac{1.4}{1}$$

Summary

We learned that a rate is a comparison

Cross Product

In proportions are equal. If the ratios are not in proportion the cross products are not equal.

Example

$$A. \frac{6}{15} = \frac{4}{10}$$

$$\frac{6}{15} \times \frac{4}{10} = \frac{60}{60}$$

A cross product represents