

Proportion – the statement of equality of two ratios;
an equation stating that two ratios are equal.

Proportions

PROPORTIONS

A proportion is a statement in which two ratios or rates are equal.

An example of a proportion is the following statement:

30 dollars is to 5 hours as 60 dollars is to 10 hours.

This is written

$$\frac{\$30}{5 \text{ hr}} = \frac{\$60}{10 \text{ hr}}$$

A typical proportion problem will have one unknown quantity, such as

$$\frac{1 \text{ mile}}{20 \text{ min}} = \frac{x \text{ miles}}{60 \text{ min}}$$

We can solve this equation by cross multiplying as shown:

$$20x = 60 \cdot 1$$

$$x = \frac{60}{20} = 3.$$

So, it takes 60 minutes to walk 3 miles.