

Ratios and Proportions

A ratio is a comparison of two or more numbers or a relationship between two or more quantities. A ratio can be written in fraction form, with a colon, or with the word "to". Order makes a difference and labels are necessary.

Jack scored 24 points, Sam scored 18 points.

$$\frac{\text{Jack}}{\text{Sam}} = \frac{24 \text{ pts}}{18 \text{ pts}} = \frac{4 \text{ pts}}{3 \text{ pts}}$$

A proportion is a set of two ratios that are equal. If there is a variable or unknown value in a proportion, you can solve it by using a multiplier, Giant One, or ratio table.

$$\frac{5}{12} = \frac{10}{24} = \frac{x}{84} \quad x=35$$

Note: In the original image, there are arrows indicating that the first fraction is multiplied by 2 to get the second, and by 7 to get the third. The multiplier 'x' is written above the arrow from 10 to x, and 'x7' is written below the arrow from 24 to 84.

10	5	15	20	25	30	35
24	12	36	48	60	72	84