

Ratio and Proportion

Ratio - a comparison of 2 numbers

example: In Ms. Smith's class, there were
10 girls + 14 boys

ratio of boys to girls 14:10 $\frac{14}{10} = \frac{7}{5}$

ratio of girls to total 10:24 $\frac{10}{24} = \frac{5}{12}$

Proportion - an equation with a ratio on each side

Example: $\frac{3}{4} = \frac{15}{20}$ $\frac{1}{2} = \frac{x}{10}$

We can use ratio + proportion to solve certain problems.

Example: If the ratio of girls to boys in a certain school is 7:9 and there are 523 girls, how many boys are there?

$$\frac{\text{girls}}{\text{boys}} = \frac{7}{9} = \frac{523}{x}$$

$$\frac{7x}{7} = \frac{9(523)}{7}$$

$$x = \frac{9(523)}{7}$$

$$x = 672.42..$$

$$x = 672$$

There are 672 boys in this school