

Ratios & Proportions

<p>Objectives</p> <ul style="list-style-type: none">• Solve Proportions <p>Notes</p> <p>Definition <i>Ratio</i> – a comparison of two numbers by division</p> <p>Ratios can be written in three different ways</p> <ol style="list-style-type: none">1. Using the word “to” x to y 5 to 7 8 to 32. Using a colon $x:y$ 5:7 8:33. And as a fraction in simplest form. $\frac{x}{y}$ $\frac{5}{7}$ $\frac{8}{3}$ <p>Definition <i>Proportion</i> – an equation stating that two ratios are equal</p> <p>Examples of proportions:</p> $\frac{10}{5} = \frac{30}{15} \quad \frac{1}{2} = \frac{3}{6} \quad \frac{3}{4} = \frac{15}{20}$ <p>To determine if two ratios form a proportion, check their <i>cross products</i>.</p> <p>Proportions that involve a variable can be solved using cross products.</p>	<p>Examples</p> <p>Fill in the missing number to complete the proportion.</p> <ol style="list-style-type: none">1. $\frac{1}{5} = \frac{\quad}{25}$2. $\frac{\quad}{6} = \frac{12}{24}$3. $\frac{3}{\quad} = \frac{21}{28}$4. $\frac{33}{\quad} = \frac{3}{5}$5. $\frac{4}{9} = \frac{40}{\quad}$6. $\frac{12}{8} = \frac{\quad}{2}$ <p>Use cross products to determine whether each pair of ratios forms a proportion.</p> <ol style="list-style-type: none">7. $\frac{2}{3}, \frac{12}{18}$8. $\frac{2}{7}, \frac{4}{14}$9. $\frac{3}{8}, \frac{6}{12}$10. $\frac{1.5}{3}, \frac{4.5}{9}$11. $\frac{2.5}{6}, \frac{3.4}{5.2}$12. $\frac{2.3}{3.4}, \frac{0.3}{3.6}$
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