



6.7 Proportions

Need To Know



- Special Focus on Proportions
Page 380-382, Homework #23, 35–45 odd
- Idea of proportions
- How to solve proportion
- Solving proportion word problems



Ratios and Proportions

A _____ is a way to compare two numbers.

We write a ratio of a and b as: a to b or $\frac{a}{b}$

A _____ is an equation of two ratios.

Examples:

$$\frac{12}{36} = \frac{1}{3}$$

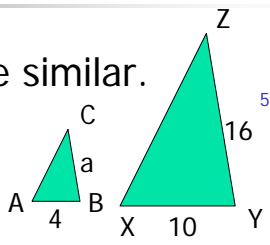
$$\frac{2}{9} = \frac{8}{x}$$

$$\frac{3}{x} - 1 = \frac{2}{x^2}$$



Apply Proportions

Triangles ABC and XYZ are similar.
Solve for side "a".



Steps

1. Familiarize
2. Translate
3. Carry out
4. Check
5. State answer

Tools

1. Keywords
2. Drawing
3. Simpler problem
4. Tables/Patterns
5. Charts
6. Guess
7. Verbal Model



Apply Proportions

To estimate the number of trout in a lake, a naturalist catches, tags and releases 112 trout. Later, 82 trout are caught; 32 of the have tags. Estimate the number of trout in the lake.

Steps

1. Familiarize
2. Translate
3. Carry out
4. Check
5. State answer

Tools

1. Keywords
2. Drawing
3. Simpler problem
4. Tables/Patterns
5. Charts
6. Guess
7. Verbal Model



Apply Proportions

A manufacturer knows that during production, 8 out of 100 parts made are defective. If they plan to produce 1,650 parts, how many can they expect to be defective.

Steps

1. Familiarize
2. Translate
3. Carry out
4. Check
5. State answer

Tools

1. Keywords
2. Drawing
3. Simpler problem
4. Tables/Patterns
5. Charts
6. Guess
7. Verbal Model

end