

2/4/10

Objective:

TSWBAT
identify and
solve
proportions



Vocabulary:

cross products: multiplying the denominator of each ratio by the numerator of the other ratio.

Using Cross Products to Identify Proportions

Does each pair of ratios form a proportion?

$$\frac{3}{9} \times \frac{6}{18}$$

$$\frac{10}{7} \times \frac{30}{14}$$

1. multiply the first numerator by the second denominator.

$$3 \times 18 = 54$$

$$10 \times 14 = 140$$

2. multiply the first denominator by the second numerator.

$$9 \times 6 = 54$$

$$7 \times 30 = 210$$

3. compare the two answers to make sure they are equal.

$$54 = 54 \checkmark$$

$$140 \neq 210$$

Examples

$$\frac{2}{4}, \frac{8}{16}$$

$$\frac{3}{18}, \frac{1}{6}$$

Solving Proportions

Solve $\frac{x}{9} = \frac{4}{6}$ * cross multiply then divide

1. Write the cross products.

$$9 \cdot 4 = 6x$$

2. Multiply.

$$36 = 6x$$

3. Divide each side by the number next to the variable.

$$36 \div 6 = x \quad x = 6$$

Examples:

$$\frac{6}{8} = \frac{n}{20}$$

$$\frac{9}{12} = \frac{3}{x}$$

$$\frac{2}{8} = \frac{y}{20}$$

Practice



Homework

Reteach
6-4