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November 1, 2011

**No Warm-Up! :)**

Get out ANYTHING that needs  
to still be corrected...

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## 11/1 - Testing and solving proportions

*What is a proportion?*

2 ratios equal to each other

*How do you write it?*

$$\frac{8}{6} = \frac{4}{3}$$

NO diagonal fractions!



If two proportions can both measure the same same things, they are called **equivalent**.

$$\frac{3}{4} \text{ and } \frac{6}{8}$$



$$\frac{2}{3} \text{ and } ?? \quad \frac{4}{6} \quad \frac{8}{12} \quad \frac{6}{9} \quad \frac{20}{30}$$

Are the given proportions equivalent?

$$\frac{5 \cdot 4}{8 \cdot 4} \text{ and } \frac{20}{32}$$

Yes!

You times top  
& bottom by the  
same thing

$$\frac{4 \cdot 2}{5 \cdot 3} \text{ and } \frac{8}{15}$$

No!

$$\frac{3 \cdot ?}{2 \cdot 3} \text{ and } \frac{4}{6}$$

No!

*What does the variable have to equal in order for the proportions to be equivalent?*

$$\frac{3 \cdot 4}{8 \cdot 4} \text{ and } \frac{x}{32}$$

$$x = 12$$

$$\frac{4 \cdot 2}{b \cdot 2} \text{ and } \frac{8}{20}$$

$$b = 10$$

$$\frac{3 \cdot 3}{2 \cdot 3} \text{ and } \frac{9}{n}$$

$$n = 6$$

Solve each proportion...

$$\frac{3 \cdot 3}{8 \cdot 3} = \frac{x}{24}$$

$$x = 9$$

$$\frac{4}{b} = \frac{5}{6} \quad \text{Cross-Multiply}$$

$$\frac{5b}{5} = \frac{24}{5}$$

$$b = 4 \frac{4}{5}$$

$$\frac{3}{2} = \frac{10}{n}$$

$$\frac{3n}{3} = \frac{20}{3}$$

$$n = 6 \frac{2}{3}$$

$$\frac{c}{6} = \frac{8}{9}$$

$$\frac{9c}{9} = \frac{48}{9}$$

$$c = 5 \frac{3}{9} = 5 \frac{1}{3}$$

## Homework:

Pink **Worksheet**  
# 1-30 all

due tomorrow