

## Reteaching Page

### 8.2 – Proportions

A **proportion** is an equation that shows two equivalent ratios.

$$\frac{4}{5} = \frac{12}{15}$$

Proportions work just like equivalent fractions. To check for equivalence you cross multiply!  
 $15 * 4 = 60$  and  $5 * 12 = 60$ . The cross products are equal and therefore the ratios are equivalent.

$$\frac{7}{5} = \frac{42}{n}$$

To find a missing value in a proportion, use the “Stoney Method”  
 Cross multiply what you can and divide by the remaining number.  
 $42 * 5 = 210$  ...  $210 \div 7 = 30$  ... so  $n = 30$

Let’s practice using cross multiplication to verify that a proportion is true.

If the following is a proportion write **true**, if it is not a proportion, write **not proportional**.

$$\frac{5}{6} = \frac{15}{18}$$

$$6 * 15 = 90$$

$$5 * 18 = 90$$

\_\_\_\_\_ true \_\_\_\_\_

$$\frac{10}{6} = \frac{5}{3}$$

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$$\frac{3}{4} = \frac{8}{12}$$

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$$\frac{13}{2} = \frac{26}{4}$$

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$$\frac{4}{7} = \frac{32}{48}$$

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$$\frac{11}{12} = \frac{44}{60}$$

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Solve for  $n$ .

$$\frac{8}{18} = \frac{n}{9}$$

$$9 * 8 = 72$$

$$72 \div 18 = 4$$

$$n = 4$$

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$$\frac{10}{12} = \frac{n}{6}$$

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$$\frac{48}{n} = \frac{12}{11}$$

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