

### Journal Entry

Write a proportion that contains a variable. Name the extremes and means, and the cross products. Solve the proportion. Tell which property you used to solve the proportion and why you chose it.

Aug 18-2:52 PM

### Section 2-8 Proportions and Similar Figures

Students will be able to  
-find missing lengths in similar figures  
-use similar figures when measuring indirectly.

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Actual Boat                      Model

What is the length of the model?

$\frac{12}{4} = \frac{9}{x}$   
 ~~$\frac{12}{4} \times \frac{9}{x}$~~   
 $\frac{12x}{12} = \frac{36}{12}$   
 $x = 3$

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Similar figures have the same shape but not necessarily the same size.

Proportions can be used to find missing side lengths.

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Corresponding sides + angles

$\frac{AC}{FG} = \frac{CB}{GH} = \frac{AB}{FH}$      $\angle A \cong \angle F$   
 $\angle C \cong \angle G$   
 $\angle B \cong \angle H$

$\frac{12}{8} = \frac{18}{12} = \frac{15}{10}$   
 $\frac{3}{2} = \frac{3}{2} = \frac{3}{2}$

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Find the missing lengths.

$\frac{3}{10} = \frac{4}{x}$   
 $30 = 4x$   
 $x = 6$

$\frac{4}{5} = \frac{y}{10}$   
 $40 = 5y$   
 $y = 8$

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How tall is the light pole?

Picture 2?

Info

Solution

Oct 11-10:19 AM

What is a scale drawing?

The ratio of any length in the drawing to the actual length is always the same, called the scale.

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A model of a new campus building is 5 in. tall. If one inch represents 8.5 ft, how tall will the building be?

$$5(8.5) = 42.5'$$

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A student who is 5.25 feet tall is standing next to a tree. The shadow of the student is 20 ft and the shadow of the tree is 80 ft. What is the height of the tree?

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Hwk: pg. 134 - 136  
#6 - 18 evens, 19 - 22 all

Oct 10-3:38 PM