Warm Up: Geometry 1/7

Two trains pass going in opposite directions. The first is going 60mph and a man is walking toward the rear of the train at 5mph. The second train, going in the opposite direction, is traveling at 80mph, and a woman is walking toward the rear of her train at the of 8mph. From the point of view of the woman, the man in the first train is moving at the rate of ____mph.

Feb 27-7:39 AM

W.A.L.T.:

Define similarity and use the properties of similar figures.

W.A.S.I:

Can write similarity with the proper notation, write correspondence statements and scale factors.

Mar 7-9:45 AM

Notes!!! Similar Figures

Similar Figures are examples of non-rigid transformations. These types of transformations are called dilations.

Similar figures are the ***same shape*** but ***different sizes***.

Dec 31-10:01 PM

Notes!!! Scale Factors

Similar figures typically have a scale factor (k) from the image to the pre-image.

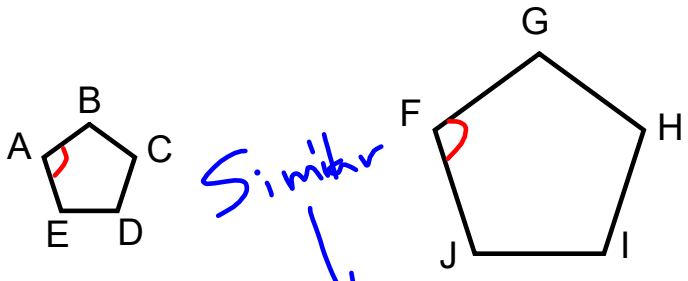
If $0 < k < 1$, then the figure becomes smaller

If $k > 1$, then the figure becomes larger

Dec 31-10:01 PM

Notes!!! Similar Figures

Similar Figures have corresponding angles that are congruent and corresponding side that are proportional.

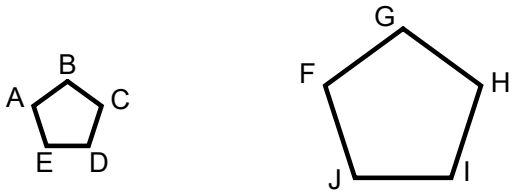


Pentagon ABCDE ~ Pentagon FGHIJ

Dec 31-10:01 PM

Notes!!! Corresponding Angles

Based on the definition of similarity what can we write about the angles of these two pentagons



Pentagon ABCDE ~ Pentagon FGHIJ

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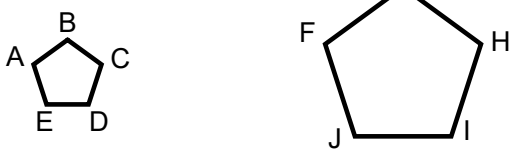
Notes!!! Corresponding Sides

Based on the definition of similarity what can we write about the sides of these two pentagons



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Notes!!! Writing Ratios

Similar figures have corresponding sides that are proportional. To help with the math questions we want to be able to write ratios of the corresponding sides.

$$\frac{\text{Big side}}{\text{Small side}} \quad \text{or} \quad \frac{\text{Small side}}{\text{Big side}}$$

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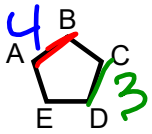
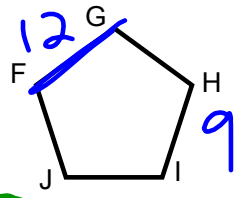
Notes!!! Corresponding Sides

Based on the definition of similarity what can we write about the sides of these two pentagons





Pentagon ABCDE ~ Pentagon FGHIJ

$$\frac{FG}{AB} = \frac{HI}{CD}$$

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

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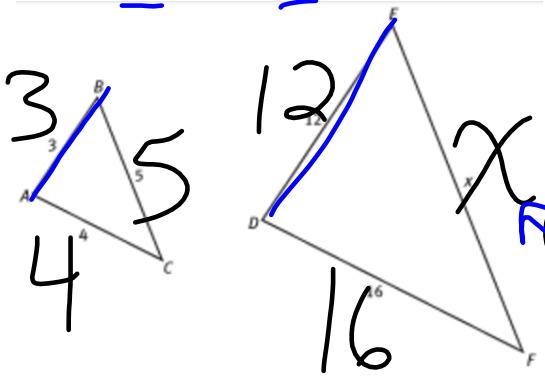
In Class Work:

1. $\Delta ABC \sim \Delta DEF$



a) ~~Write the ratio of the corresponding sides using the line segments.~~

b) Substitute the number value into the ratio of the line segment.

c) Create a proportion to solve for the unknown side.

What is the scale factor?

Mar 7-1:33 PM

Today's Activities:

- Notes - Lots of Notes

P.W. for tonight:

- pg. 271 #1 - Find the Scale factor

Day 3

Dec 31-9:59 PM