Similarity Notes

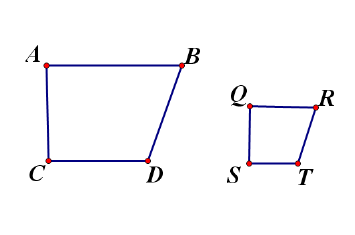
**Directions:** Watch this video: <http://www.youtube.com/watch?v=1O-ieOZ5y6s&feature=related> and fill out the notes below. It will go through the examples with you. (Note: the o’s are letters and not zeros in the above link!)

**What are similar figures?**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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The notation for similar is like a congruence symbol but without the =. ΔABC ~ΔXYZ reads triangle ABC is similar to triangle XYZ



Side \_\_\_\_\_ corresponds to side \_\_\_\_\_

Side \_\_\_\_\_ corresponds to side \_\_\_\_\_

Side \_\_\_\_\_ corresponds to side \_\_\_\_\_

Side \_\_\_\_\_ corresponds to side \_\_\_\_\_

Set up the corresponding sides as a ratio:

Their ratios form proportions. We use the proportions to state two equal ratios. When we talk about the ratios above we call them **side length ratios** or **scale factor**.

COMMON ERROR!!!!!! (write the common error below)

In addition to the sides being proportional, the corresponding angles \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

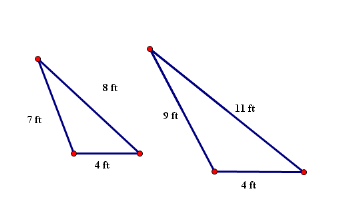
That means m< \_\_\_\_\_\_\_ = m< \_\_\_\_\_\_\_\_\_\_

That means m< \_\_\_\_\_\_\_ = m< \_\_\_\_\_\_\_\_\_\_

That means m< \_\_\_\_\_\_\_ = m< \_\_\_\_\_\_\_\_\_\_

That means m< \_\_\_\_\_\_\_ = m< \_\_\_\_\_\_\_\_\_\_

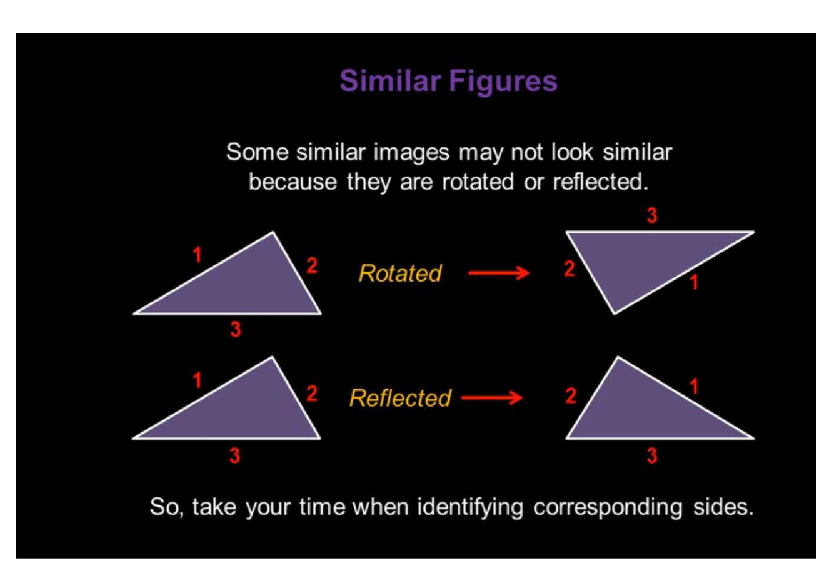
Example #1A



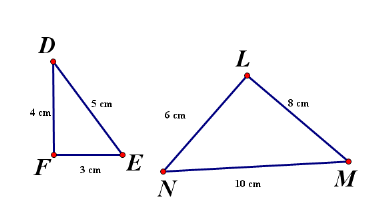
Set up side length ratios (scale factors) for each side length. Simplify each fraction.

Are they similar? Why or why not? **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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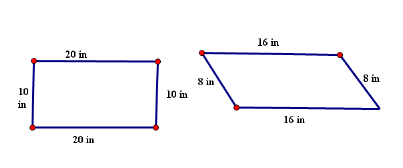
Example #1B



Which sides are corresponding? Set up the scale factors (ratios) Must show the geometry AND the number ratios:

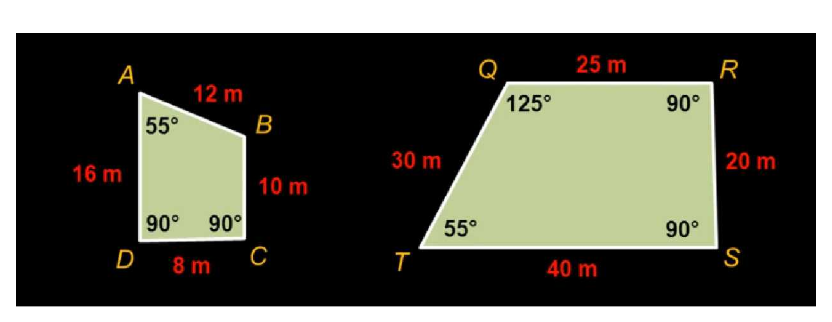
Are the triangles similar? Why or why not?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Show the sides are proportional, but these figures are not similar because

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_.

Example 2

< \_\_\_\_\_ corresponds to < \_\_\_\_\_ and both are \_\_\_\_\_\_\_\_

< \_\_\_\_\_ corresponds to < \_\_\_\_\_ and both are \_\_\_\_\_\_\_\_

< \_\_\_\_\_ corresponds to < \_\_\_\_\_ and both are \_\_\_\_\_\_\_\_

< \_\_\_\_\_ corresponds to < \_\_\_\_\_ and both are \_\_\_\_\_\_\_\_

Set up ratios for corresponding sides- Must show the geometry AND the number ratios!:

Are the two figures similar? Why or why not? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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