I can setup proportions to model similar polygons. I can identify corresponding sides and angles of similar triangles. I can determine the scale factor between two similar figures and use it to solve problems.

Polygon Similarity:

Polygons are **similar** if:

Corresponding **ANGLES** are _____.	Corresponding **SIDES** are _____.

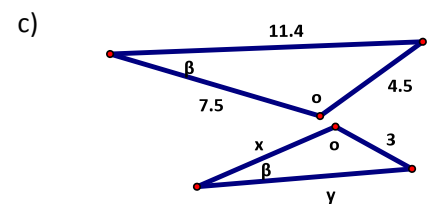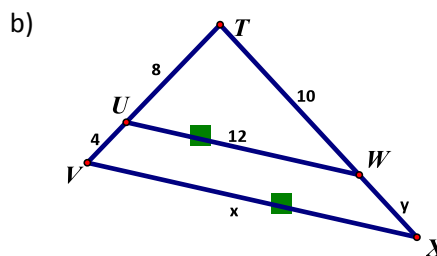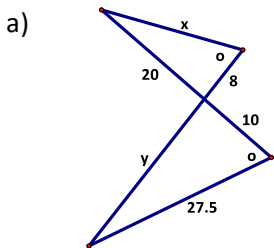
1. Given that $\triangle AFG \sim \triangle DRH$. Complete the following.

$\angle H \cong \angle$ _____ $\dfrac{DR}{AF} = \dfrac{DH}{\boxed{}}$ _____ $\angle D \cong \angle$ _____ $\dfrac{\boxed{}}{RH} = \dfrac{AG}{DH}$ _____

2. $\triangle ABC$ is similar to another triangle. Provided is some information about the two triangles, $\dfrac{BC}{DR} = \dfrac{AB}{TD}$. From this information determine the triangle similarity statement.
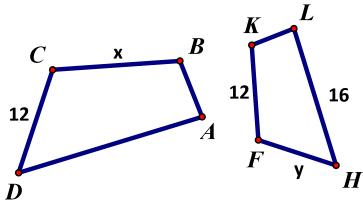
$\triangle ABC \sim \triangle$ _____

3. Solve for the missing information, given that the two triangles in each question are SIMILAR.

a)

b)

c)

4. If the three sides of a triangle are in ratio of 3:5:7 and the perimeter of the triangle is 12 cm. What is the length of the longest side?
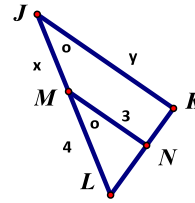
5. Use the scale factor to determine the missing values.

a) CBAD : FKLH is 3:2

b) ΔLMN : ΔLJK is 1:2

x = _____   y = _____

x = _____   y = _____

6. Use the Pythagorean Theorem to help you on these. Solving for the missing values.

If ΔABC ~ ΔDEF, and right ΔABC
   has sides of AB = 8, BC = 15,
   & AC = x where AC is the
   hypotenuse. Also, right ΔDEF has
   sides DE = z, EF = y, & DF = 51.

x = _____   y = _____

z = _____