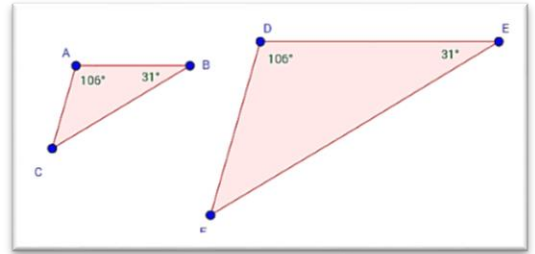


AA Similarity Exploration

Name _____ Period _____

Open a browser and go to <http://tube.geogebra.org/m/Ld9sFYbd?mobile=true>. Follow the instructions below and answer the questions.

1. If you use the link above, the first construction has been performed for you.
 - a. Construct $\triangle ABC$ and $\triangle DEF$ so that $m\angle A = m\angle D = 107^\circ$, $m\angle B = m\angle E = 31^\circ$, and $\triangle DEF$ is not congruent to $\triangle ABC$.
 - b. Find the third angle measure and the side lengths of each triangle. Record your results in column 1.
 - c. Are the two triangles similar? Explain. _____



	1.	2.	3.	4.	5.	6.
$m\angle A, m\angle D$	107°	88°	40°			
$m\angle B, m\angle E$	31°	42°	65°			
$m\angle C$						
$m\angle F$						
AB						
DE						
BC						
EF						
AC						
DF						
Similar?						

2. Move point C (and point F if you created your own construction and are not using the link provided) so that $m\angle A = 88^\circ = m\angle D$ and $m\angle B = 42^\circ = m\angle E$. Repeat steps b – c in question 1. _____
3. Move point C (and point F if you created your own construction and are not using the link provided) so that $m\angle A = 40^\circ = m\angle D$ and $m\angle B = 65^\circ = m\angle E$. Repeat steps b – c in question 1. _____
4. Complete each remaining column of the table using your own choice of two pairs of equal corresponding angle measures. Can you construct two triangles in this way that are not similar? _____
5. Make a conjecture about any two triangles with two pairs of congruent corresponding angles. _____

6. Find RS in the figure at the right.

