Geometry Regents Lomac 2015-2016 **Date** 1/21 **due** 1/22 | **Similar Triangles Proof AA,SSS, SAS 6.4R**

Name _____ **Per**_____

LO: I can show that triangles are similar using the AA, SSS, and SAS similarity shortcuts and use them to find unknown sides and angles.

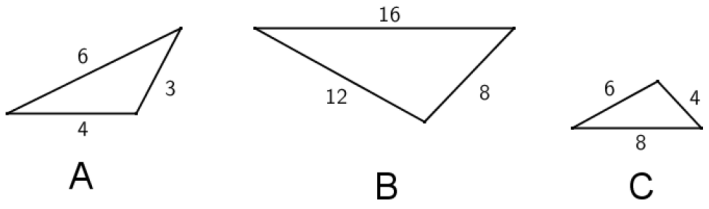
☐ **DO NOW** On the back of this packet

☐ (1) calculator **Similarity: Proof**

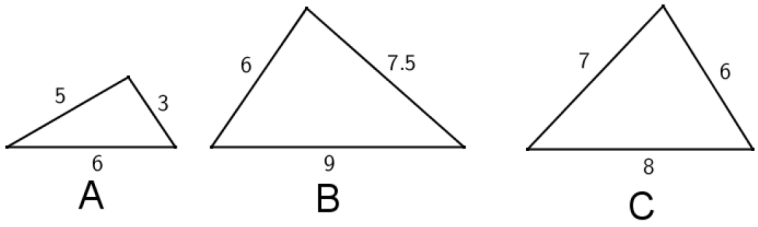
☐ (a) Use AA, SSS, and SAS shortcuts from lesson 6.2 to complete this problem.

For each part (a) through (d) below, state which of the three triangles, if any, are similar and why.

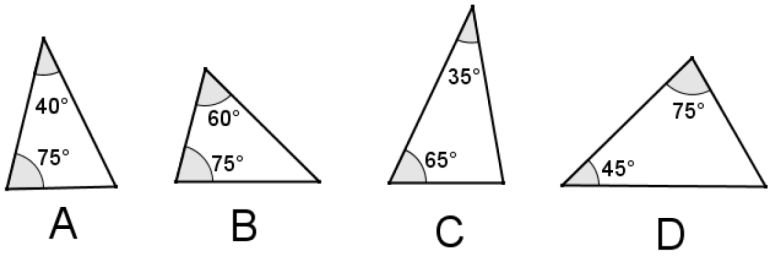
a.



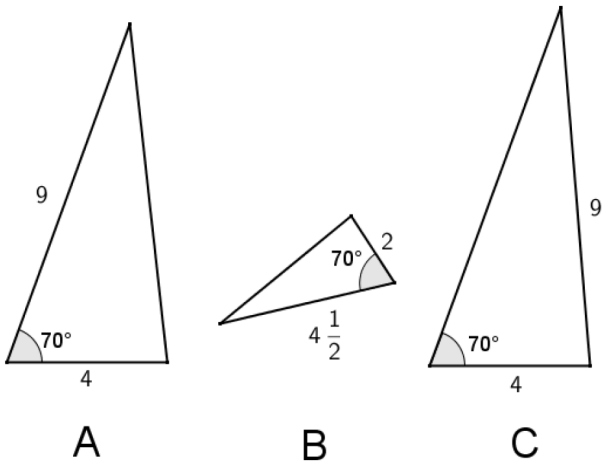
b.



c.



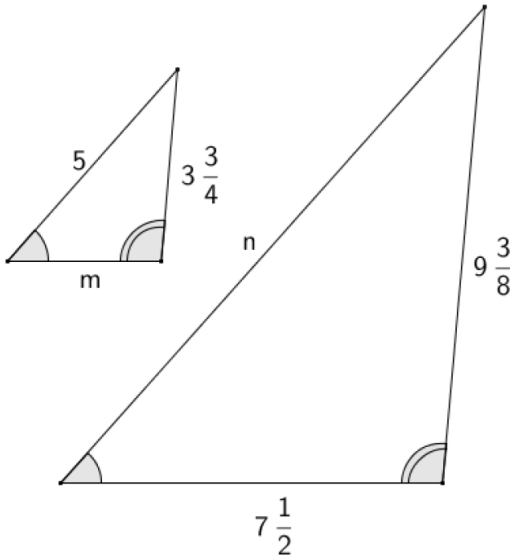
d.



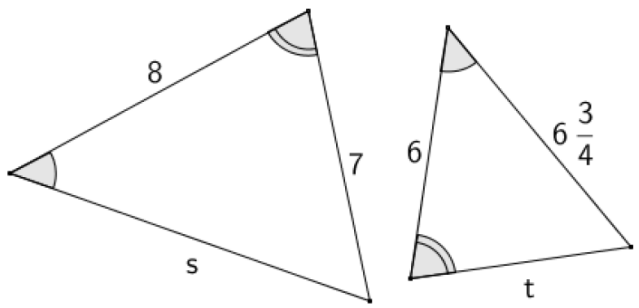
☐ (2) calculator **Similarity: Using AA~, SAS~, and SSS~**

For each pair of similar triangles below, determine the unknown lengths of the sides labeled with letters.

a.



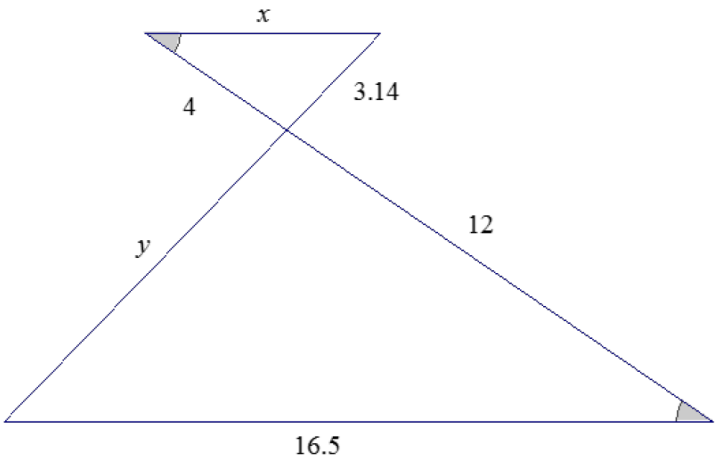
b.



☐ (3) highlighters & calculators **Similarity: Using similar triangles to find unknown measures.**

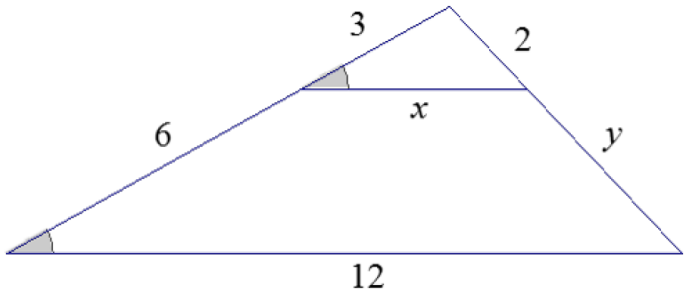
☐ (a)

The triangles shown below are similar. Use what you know about similar triangles to find the missing side lengths x and y.



☐ (b)

The triangles shown below are similar. Write an explanation to a student, Claudia, of how to find the lengths of x and y.



☐ (4) compass, straightedge

Exit Ticket

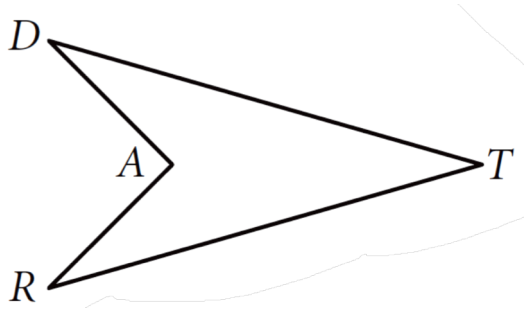
The Exit Ticket is on the last page of this packet. Do it, tear it off and turn it in.

☐ (5) compass, straightedge

Homework:

(1) Given: $\overline{DT} \cong \overline{RT}, \overline{DA} \cong \overline{RA}$

Prove: $\angle D \cong \angle R$ (Hint: draw an auxiliary line to create triangles to prove congruent first.)



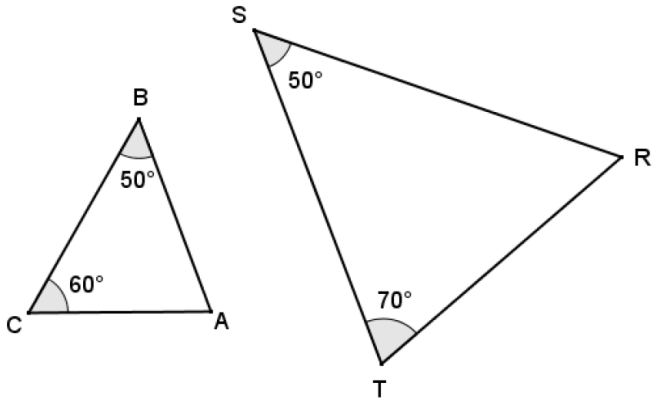
☐ (5) compass, straightedge

Homework:

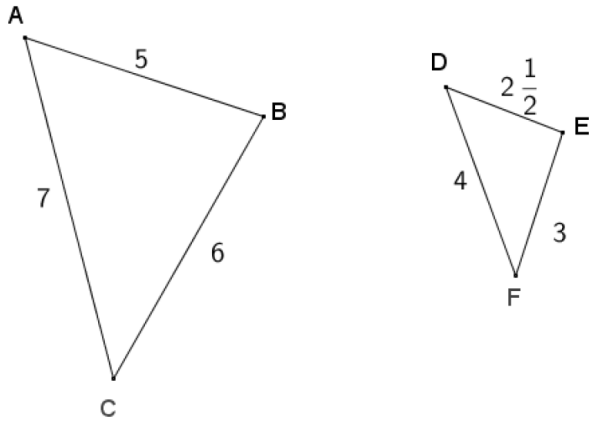
(2)

For each given pair of triangles, determine if the triangles are similar or not, and provide your reasoning. If the triangles are similar, write a similarity statement relating the triangles.

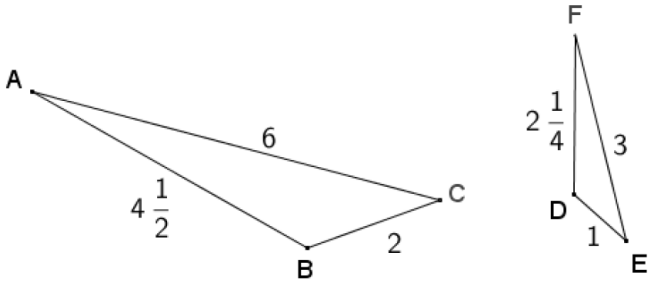
a.



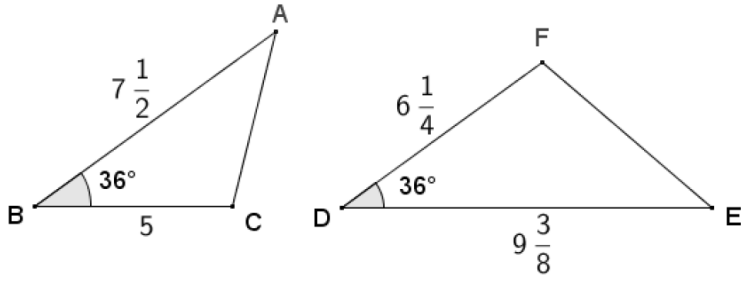
b.



c.



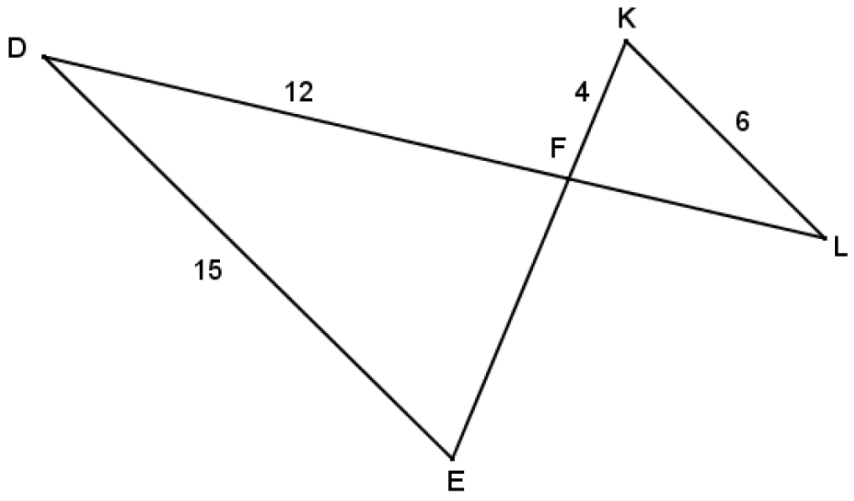
d.



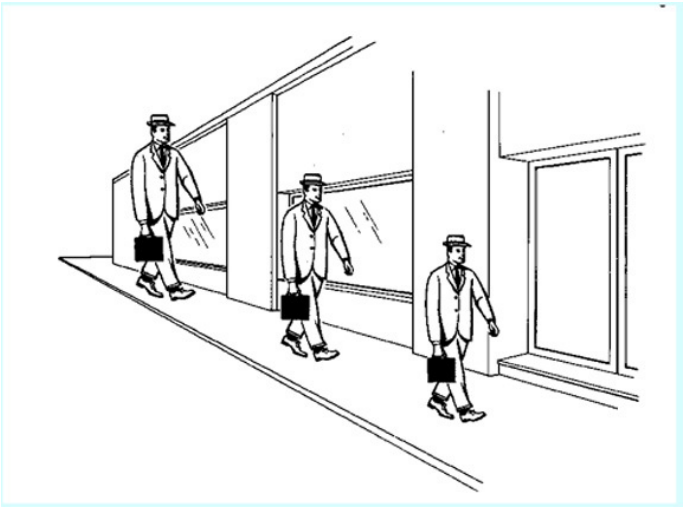
Exit Ticket Name_____ Date _____ Per_____ 6.4R

(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

Given the diagram to the right with $\overline{DE} \parallel \overline{KL}$ show that the triangles are similar. Then find the measures of FE and FL



DO NOW **Name**_____ **Date** _____ **Per**_____ **6.4R**

(1) Sketch an example for each triangle similarity shortcut.

(2) Are the images of this man similar, congruent, both, or neither?