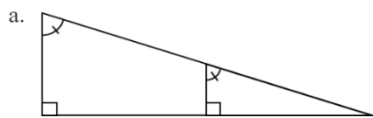


Name: _____

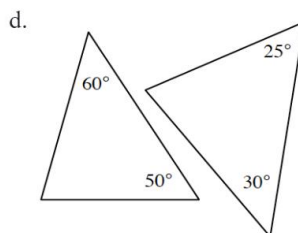
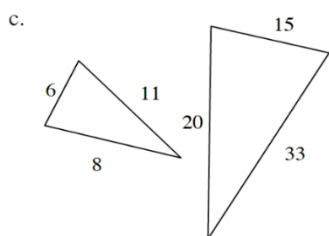
Period: _____ Date: _____

Homework 2.3.1

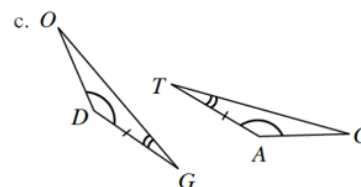
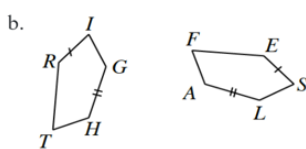
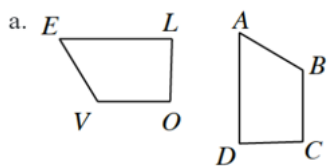
1. Decide if each pair of triangles below is similar. If the triangles are similar, justify your conclusion by stating the similarity condition you used. Also, describe a possible sequence of transformations that would carry one onto the other. If the triangles are not similar, explain how you know they are not similar



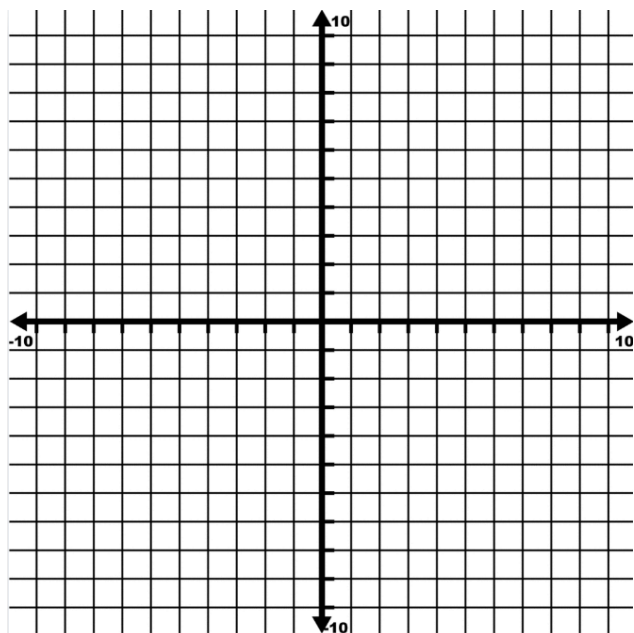
equilateral triangles



2. Assume that each pair of figures below is similar. Write a similarity statement to illustrate which parts of each shape correspond.

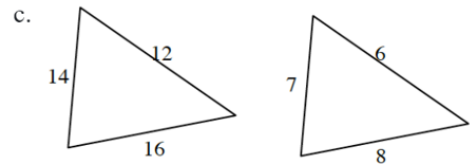
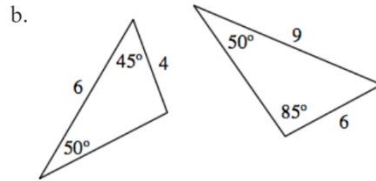
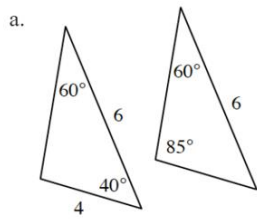


3. Plot ABCDE with vertices $A(-3, -2)$, $B(5, -2)$, $C(5, 3)$, $D(1, 6)$, and $E(-3, 3)$ on graph paper.

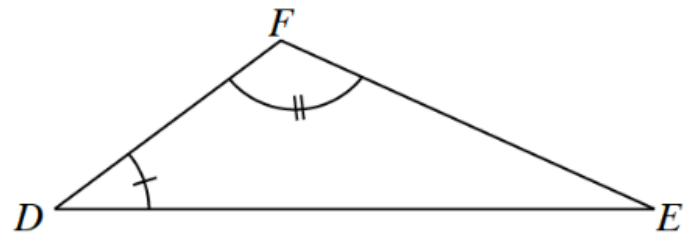
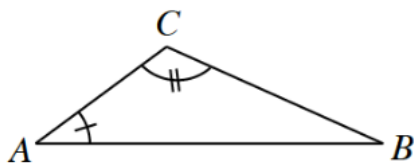


- Enlarge it from the origin by a factor of 2. Label the image $A'B'C'D'E'$.
- How are the coordinates of the vertices of $A'B'C'D'E'$ related to the coordinates of the vertices of ABCDE?
- What are the area and the perimeter of both figures?

4. Determine which of the following pairs of triangles are similar. Justify your answer.



5. One possible proportion for the similar triangles below is $\frac{AC}{AB} = \frac{DF}{DE}$. Write at least three more proportions given that $\triangle ABC \sim \triangle DEF$.



6. Solve the system of equations at below using the method of your choice, then state the solution to the system. If there is not a solution, explain why.

$$y = -\frac{2}{5}x + 1$$

$$y = -\frac{2}{5}x - 2$$