

Assignment

Write

Give an example of each term. Include a sketch with each example.

1. Angle-Angle Similarity
2. Side-Side-Side Similarity
3. Side-Angle-Side Similarity
4. included angle
5. included side

Remember

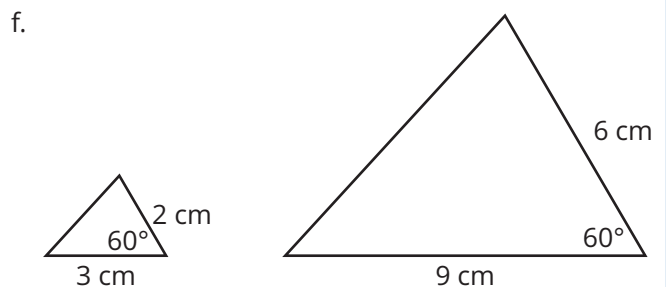
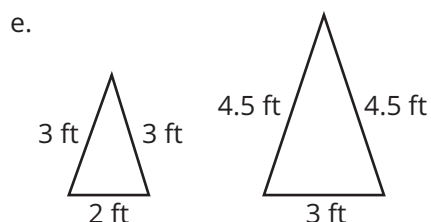
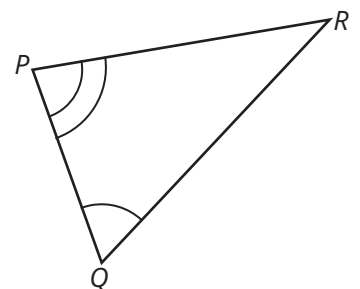
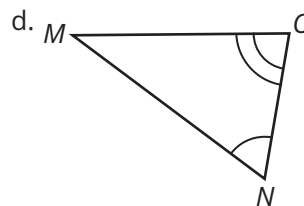
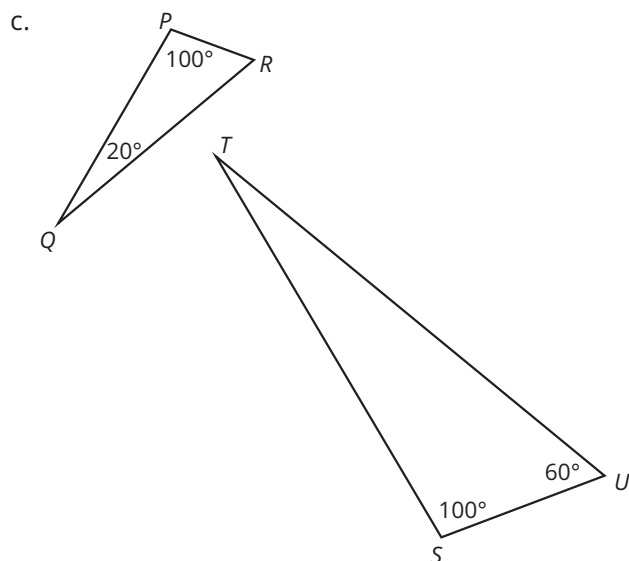
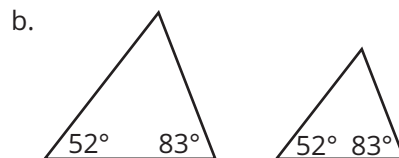
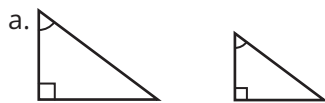
The Angle-Angle Similarity Theorem states: "If two angles of one triangle are congruent to two angles of another triangle, then the triangles are similar."

The Side-Side-Side Similarity Theorem states: "If all three corresponding sides of two triangles are proportional, then the triangles are similar."

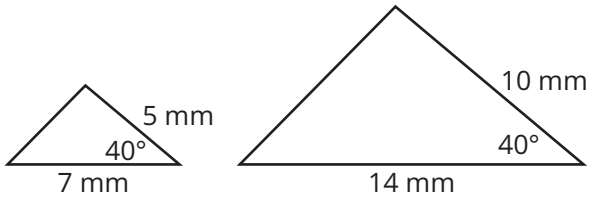
The Side-Angle-Side Similarity Theorem states: "If two of the corresponding sides of two triangles are proportional and the included angles are congruent, then the triangles are similar."

Practice

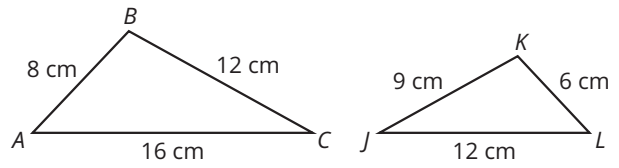
1. Determine whether the triangles in each pair are similar. Explain your reasoning.



g.

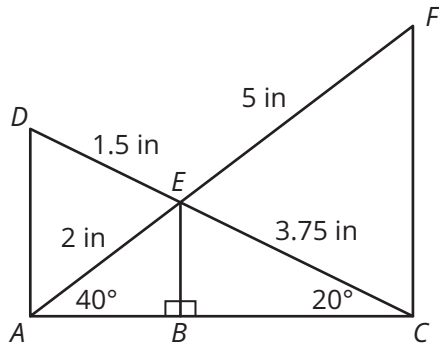


h.



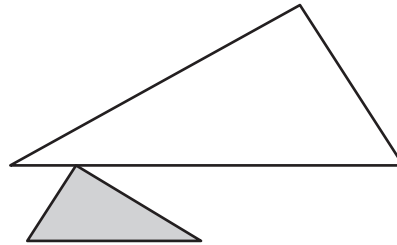
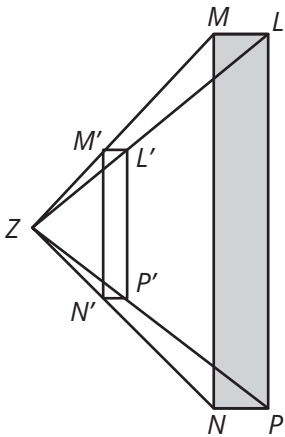
Stretch

Determine whether there are any similar triangles in the figure. Explain your reasoning.

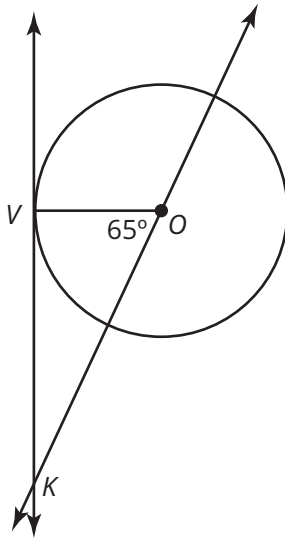


Review

- Given the pre-image and image, determine the scale factor.
- Demonstrate that the two triangles are similar using a sequence of dilations and rigid motions.



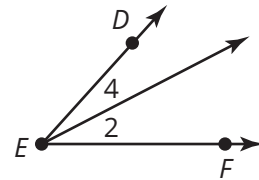
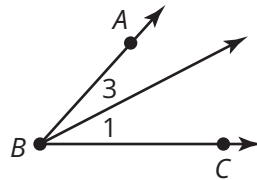
3. If \overline{KV} is a tangent segment and \overline{OV} is a radius, what is the measure of $\angle VKO$? Explain your reasoning.



4.

Given: $m\angle 1 = m\angle 2$; $m\angle 3 = m\angle 4$

Prove: $m\angle ABC = m\angle DEF$



Statements	Reasons
1. $m\angle 1 = m\angle 2$; $m\angle 3 = m\angle 4$	1.
2. $m\angle 1 + m\angle 3 = m\angle ABC$ $m\angle 2 + m\angle 4 = m\angle DEF$	2.
3. $m\angle 1 + m\angle 3 = m\angle 2 + m\angle 3$	3.
4. $m\angle 1 + m\angle 3 = m\angle 2 + m\angle 4$	4.
5. $m\angle ABC = m\angle DEF$	5.