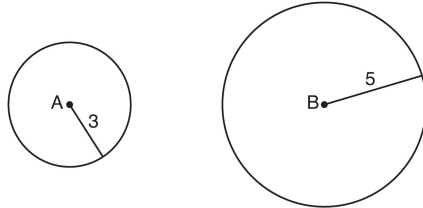


Name _____
Mr. Schlansky

Date _____
Geometry

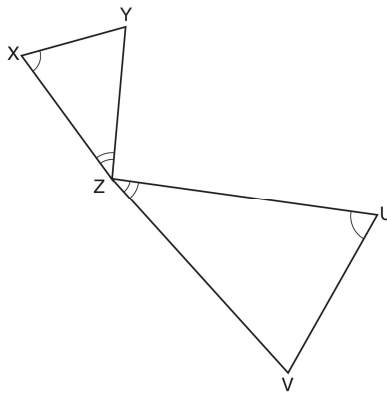
Sequences of Similarity Transformations

1. As shown in the diagram below, circle A has a radius of 3 and circle B has a radius of 5.



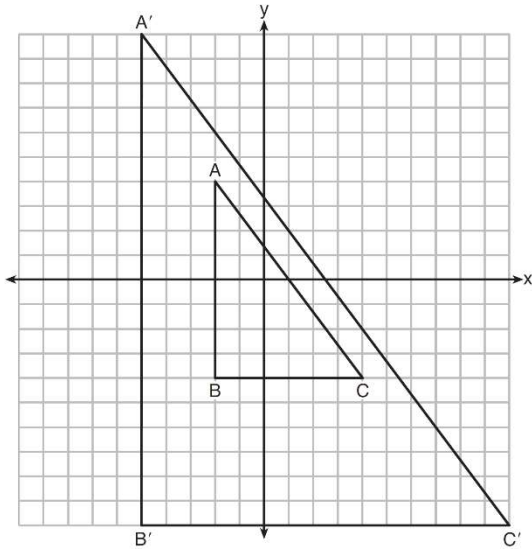
Use transformations to explain why circles A and B are similar. Are the circles congruent? Explain your answer.

2. In the diagram below, triangles XYZ and UVZ are drawn such that $\angle X \cong \angle U$ and $\angle XZY \cong \angle UVZ$.



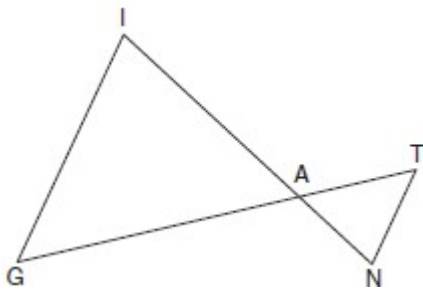
Describe a sequence of transformations that maps $\triangle XYZ$ onto $\triangle UVZ$. Are the triangles similar? Explain your answer.

3. In the diagram below, $\triangle A'B'C'$ is the image of $\triangle ABC$ after a transformation.

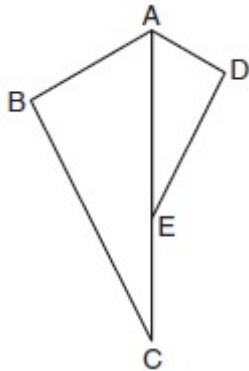


Describe the transformation that was performed. Explain why $\triangle A'B'C' \sim \triangle ABC$.

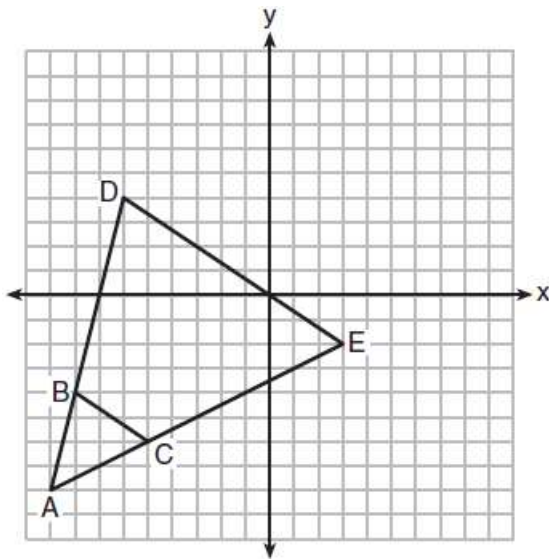
4. In the diagram below, \overline{GI} is parallel to \overline{NT} , and \overline{IN} intersects \overline{GT} at A . Describe a sequence of transformations that maps $\triangle GIA$ onto $\triangle TNA$. Are the triangles similar? Explain your answer. Are the triangles congruent? Explain your answer.



5. Describe a sequence of transformation that would map $\triangle ADE$ onto $\triangle ABC$. What is the relationship between $\triangle ADE$ and $\triangle ABC$? Explain your answer.



6. Triangle ABC and triangle ADE are graphed on the set of axes below. Describe a transformation that maps triangle ABC onto triangle ADE . Explain why this transformation makes triangle ADE similar to triangle ABC .



7. Given: $\triangle AEC$, $\triangle DEF$, and $\overline{FE} \perp \overline{CE}$

What is a correct sequence of similarity transformations that shows $\triangle AEC \sim \triangle DEF$?

- 1) a rotation of 180 degrees about point E followed by a horizontal translation
- 2) a counterclockwise rotation of 90 degrees about point E followed by a horizontal translation
- 3) a rotation of 180 degrees about point E followed by a dilation with a scale factor of 2 centered at point E
- 4) a counterclockwise rotation of 90 degrees about point E followed by a dilation with a scale factor of 2 centered at point E

