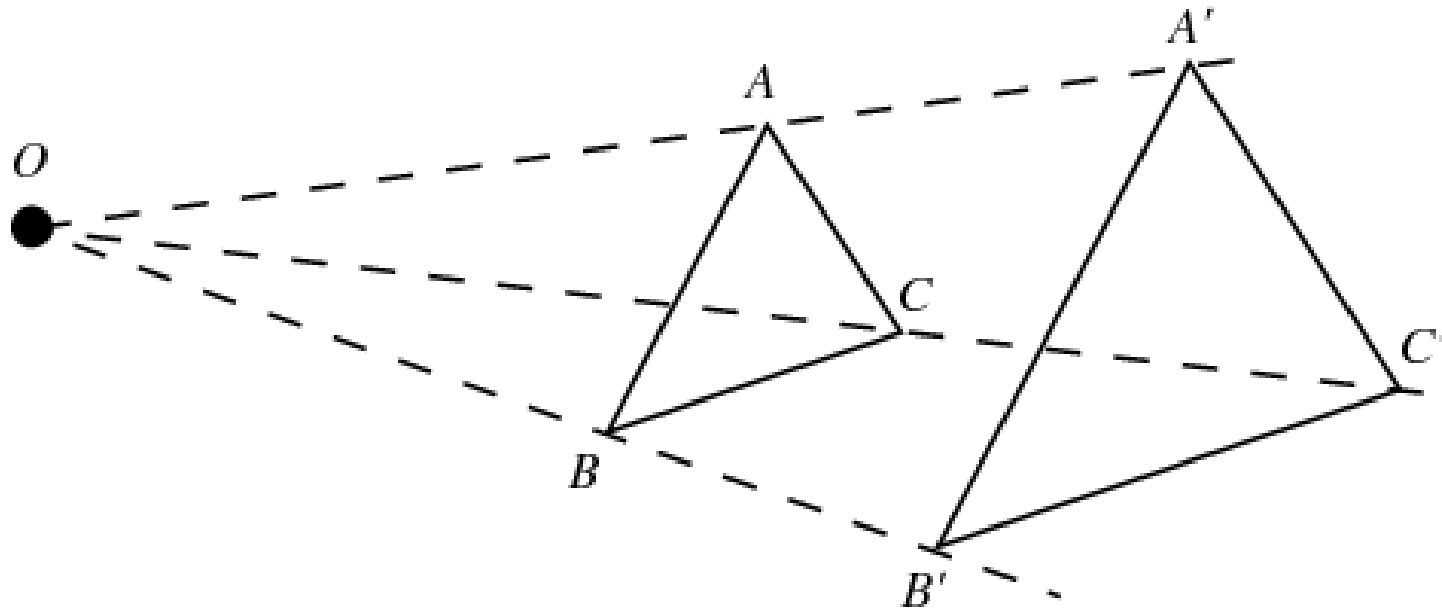1) What is the center of dilation?

2) Is this a scale up or scale down?

A dilation produces *similar figures.* **Similar figures** are geometric figures where all pairs of corresponding angles are congruent and the lengths of all corresponding sides are proportional.

8. **Use point *T* as the center of dilation.**

T •

a. Use a metric ruler and what you know about dilations
   to demonstrate that Figure *E* is similar to Figure *X*.
   Explain your reasoning.

b. What do you know about the angles in Figures *E* and *X*?
   Explain your reasoning.

9. What scale factor will produce congruent figures? Provide an
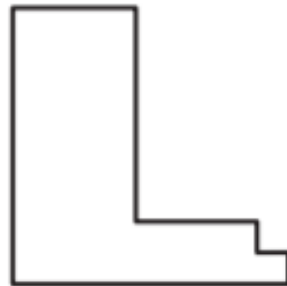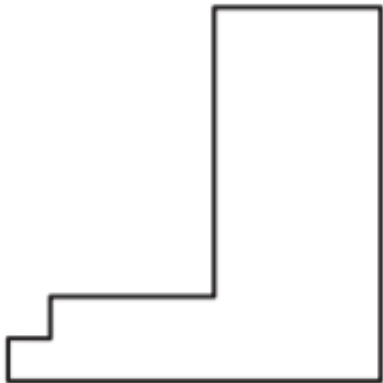   example to justify your answer.

1. **Demonstrate that the figures in each pair are similar using dilations and rigid motions. Explain your process and describe the transformations you used.**
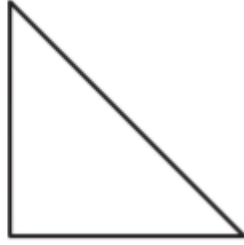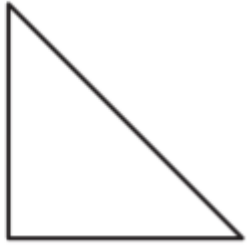
<div align="center">
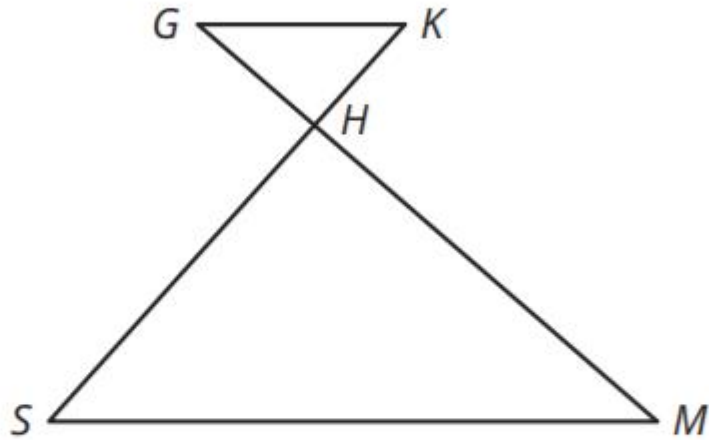
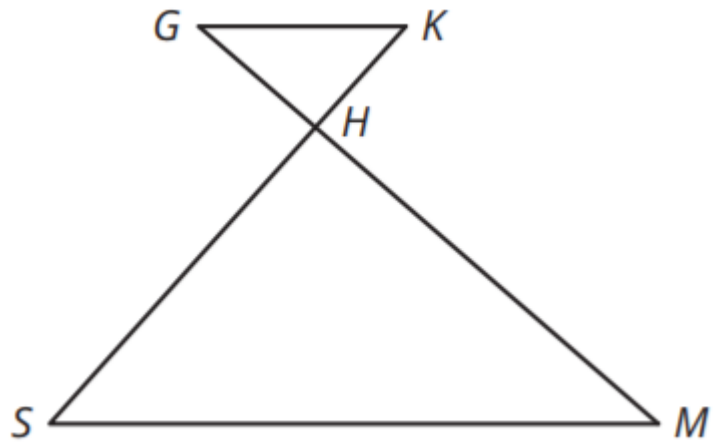**Figure A**   **Figure B**

</div>

a.

b.

c.

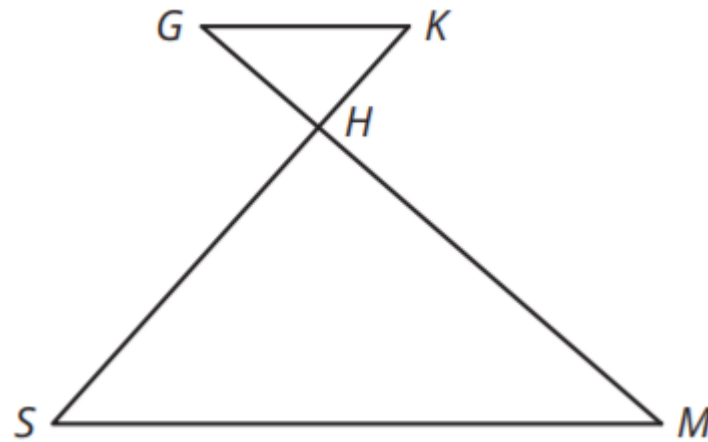## 2. Consider the diagram shown and the three separate cases.

a. Suppose $\overline{GK}$ is parallel to $\overline{SM}$.
   Describe a sequence of transformations that maps one
   triangle onto the other triangle.

b. Suppose ∠G ≅ ∠S.
Describe a sequence of transformations that maps one
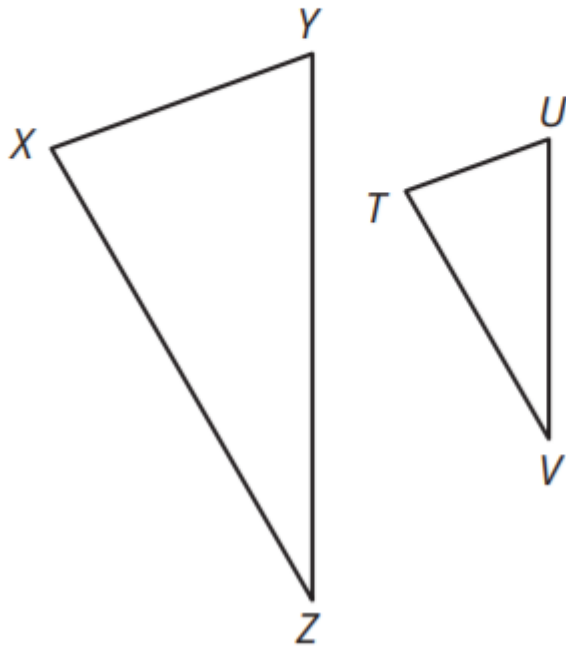**triangle onto the other triangle.**

If $ab = cd$, then you know that

$$\frac{a}{c} = \frac{d}{b} \text{ or}$$

$$\frac{a}{d} = \frac{c}{b}.$$

c. Suppose $(KH)(SH) = (GH)(MH)$.
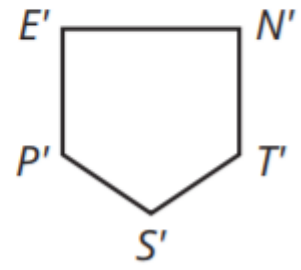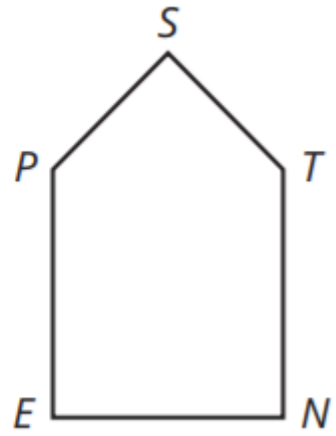   Describe a sequence of transformations that maps one triangle onto the other triangle.

3. Use the definition of similarity in terms of transformations to determine whether each pair of figures are similar. Justify your reasoning.

a.

b.

c.