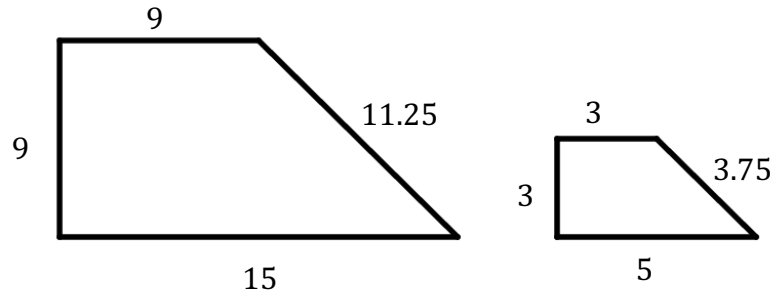
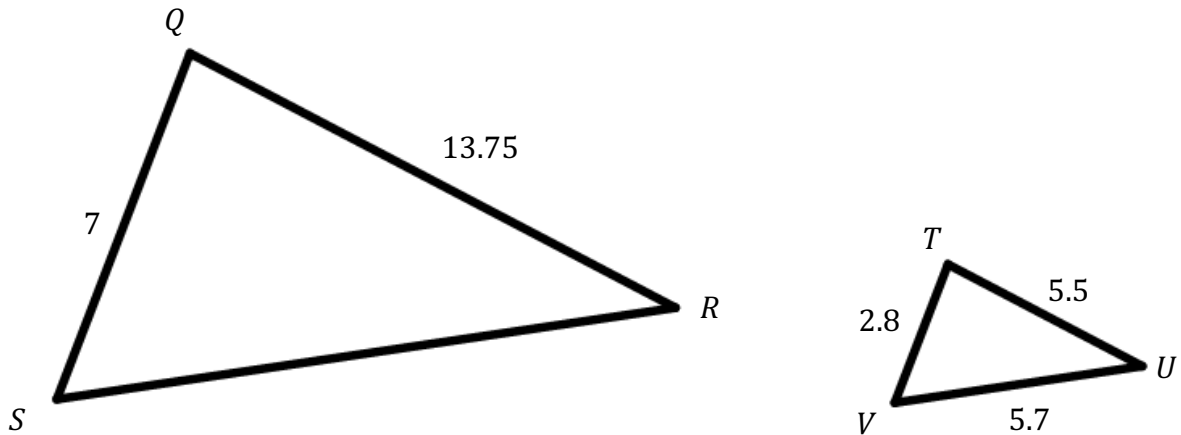


Introduction to Polygons – Part 2
Congruence and Similarity of Polygons – Part 2
Independent Practice

1. Figures $ABCD$ and $DEFG$ below are similar. What is the scale factor?



2. Consider similar figures QRS and TUV below.



Part A: What is the scale factor?

Part B: Find the length of \overline{RS} .

3. You are printing posters for a concert and need them to be 35" tall. The small copy you have is 8" wide by 10" inches tall.

Part A: What scale factor should you use when enlarging the image to make sure proper proportions are maintained?

Part B: How wide will the enlarged poster be?

Part C: How do the areas of the posters relate to one another? What are two ways you can justify your answer?

4. Triangle GAP is similar to triangle DOT . \overline{GA} is 4.4 inches long, \overline{AP} is 8.3 inches long, \overline{OT} is 24.9 inches long, and \overline{TD} is 15.6 inches long. How long is \overline{GP} ?

5. John is building a football table and wants it to be similar in size to a real soccer field. A full size soccer field is 336 feet long and 210 feet wide. What will be the area of his football table if he wants it to be 2.5 feet wide?

6. Which transformation would result in the area of a polygon being different from the area of its pre-image?
- Ⓐ Dilated by a scale factor of one
 - Ⓑ Dilated by a scale factor of 2.5
 - Ⓒ Rotated 270° counterclockwise about the origin
 - Ⓓ Translated four units up and two units to the right
7. Quadrilateral *HALK* is congruent to quadrilateral *FORT*. $m\angle H = 60^\circ$, $m\angle L = 152^\circ$, and $m\angle T = 42^\circ$. What is $m\angle A$?

