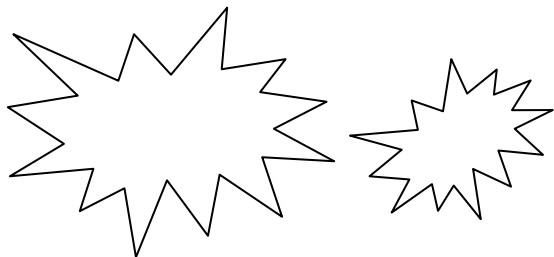


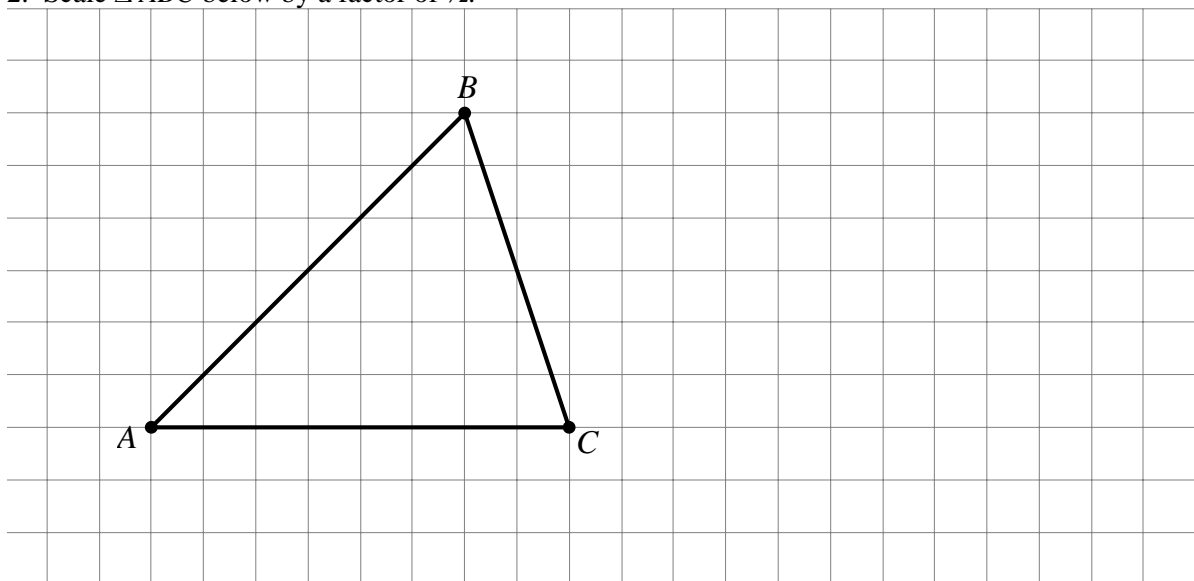
Geometry Scaling Practice & Investigation

Instructions: Work with a partner and hand in one per pair. You should have enough time to finish IF you work efficiently, but at the end of the period, hand in what you have. Hand in your HW for today (volumes worksheet + book work) to the substitute.

1. In the pair of pictures below, what scale factor will transform the picture on the left into the scaled picture on the right? Draw on the pictures to show what you measured, and write your measurements below.



2. Scale $\triangle ABC$ below by a factor of $\frac{1}{2}$.



What is the ratio $\frac{\text{Perimeter } \triangle A'B'C'}{\text{Perimeter } \triangle ABC}$? _____

What is the ratio $\frac{[A'B'C']}{[ABC]}$? _____

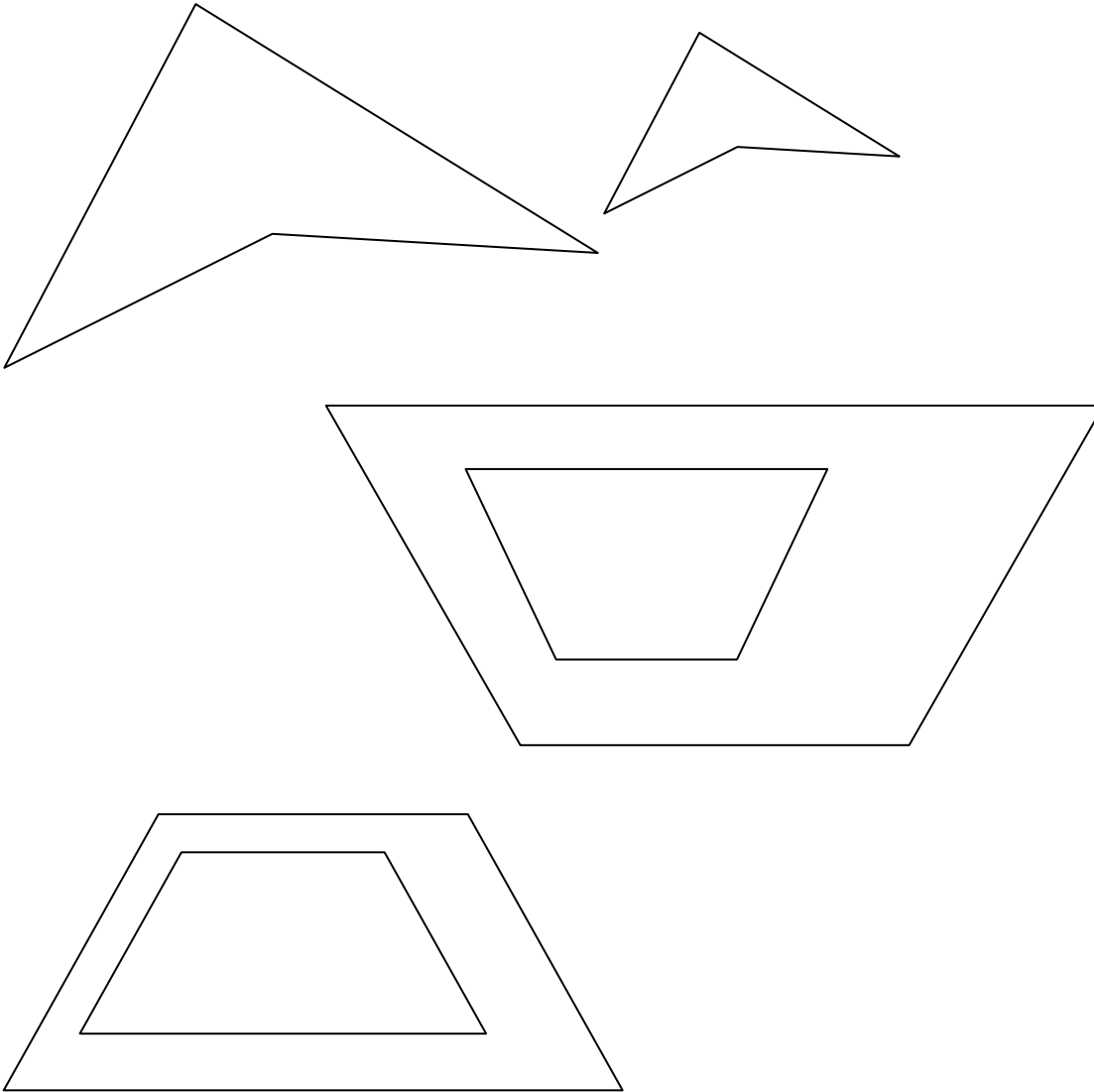
3. A 6-inch cube is scaled by a factor of $\frac{3}{4}$.

a. What is the volume of the original cube?

b. What is the volume of the scaled cube?

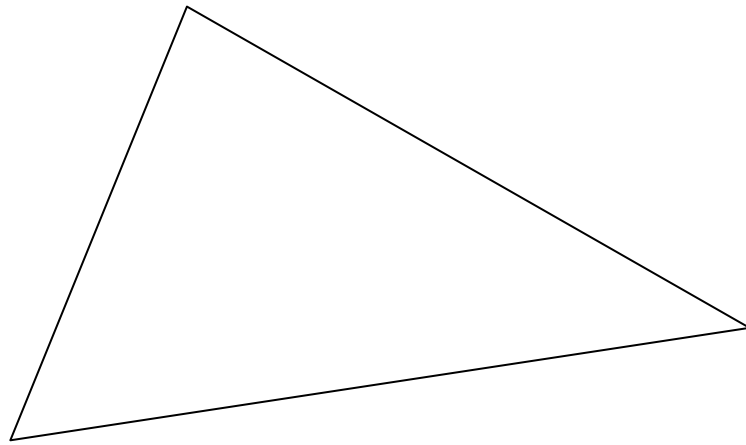
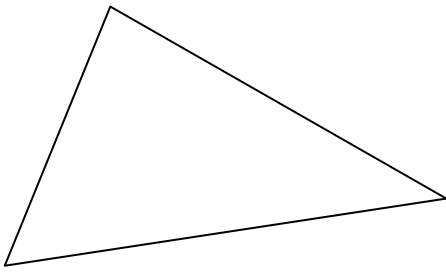
4. In each case below,

- MEASURE to see whether the rectangles are scaled copies of each other, and
- DRAW LINES connecting corresponding vertices.

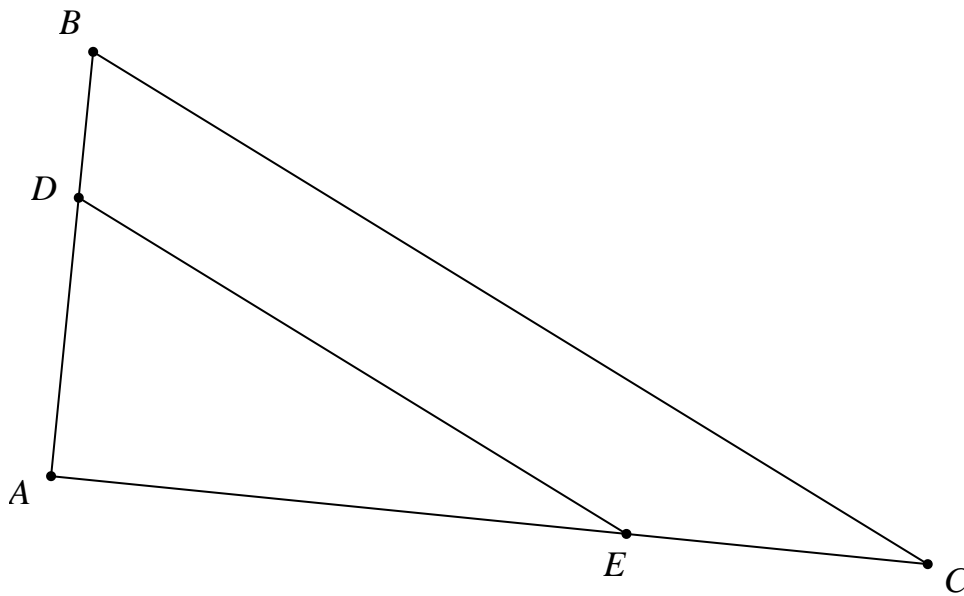


NOW: how can you use lines connecting corresponding vertices to help determine if two shapes are scaled copies of each other—*without* measuring?

5. On the next page, the two triangles at the top are scaled copies of each other. Cut out the smaller one and try laying it on the larger one. What do you notice about the sides and angles? Write your conclusions in the space here:.



7. Consider $\triangle ABC$ and $\triangle ADE$ below.



a. What measurements confirm that $\triangle ADE$ is a scaled copy of $\triangle ABC$? Record them and any calculations below.

b. How do your results in #4 and #5 confirm that $\triangle ADE$ is a scaled copy of $\triangle ABC$?

8. If $\frac{u}{v} = \frac{w}{x}$, then which of the following are also true? Check with specific numbers!

(a) $\frac{u+v}{v} = \frac{w+x}{x}$

(b) $ux = wv$

(c) $\frac{u}{v} = \frac{x}{w}$

(d) $\frac{u+v}{v} = \frac{w+x}{x}$

(e) $\frac{u}{x} = \frac{w}{v}$

(f) $\frac{x}{w} = \frac{v}{u}$

(g) $uw = vx$