7.G.1: Worksheet
Solutions

1. What are the new dimensions if we shrink the triangle in Figure 1 by a factor of $\frac{1}{2}$?
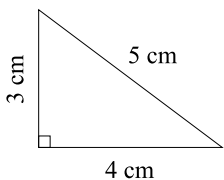
   5 cm

   3 cm

   4 cm

   Figure 1.

   1.5 cm, 2 cm, 2.5 cm

2. Expand the rectangle in Figure 2 by a factor of 3 and redraw it, labeling the dimensions.
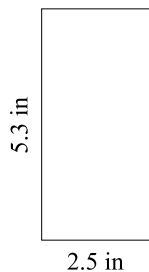
   5.3 in

   2.5 in

   Figure 2.

   Answer should have a width of 7.5 in and a length of 15.9 in.

3. What are the new dimensions if we expand the parallelogram in Figure 3 by a factor of 4.5?
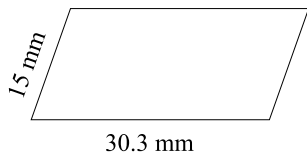
   15 mm

   30.3 mm

   Figure 3.

   136.35 mm, 67.5 mm

4. Reduce the triangle in Figure 4 by a factor of 0.25 and redraw it, labeling the dimensions.
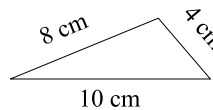
   8 cm

   4 cm

   10 cm

   Figure 4.

   Answer should have sides labeled 1 cm, 2 cm, and 2.5 cm.

5. The Empire State Building is 1250 feet tall. Brock makes a scale model of the building at 1:625 of its actual size. How tall is the model?
   2 ft

6. What's the scale factor between the two trapezoids in Figure 5 (starting with the smaller one)?
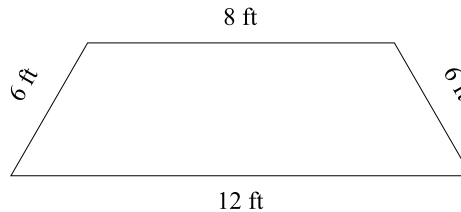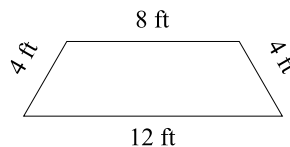
   4 ft

   8 ft

   4 ft

   12 ft

   6 ft

   8 ft

   6 ft

   12 ft

   Figure 5.

   1.5

7. If the triangle in Figure 6 is expanded by a factor of 4, what's the new triangle's area?
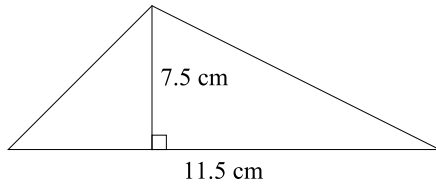
Figure 6.

690 cm^2

8. If a rectangle that's 13 ft long and 4.3 ft wide is tripled in size, what's the new rectangle's area? 503.1 ft^2

9. The mad scientist Dr. X throws his favorite picture frame into his Enlarging Machine so it'll fit his huge One Direction poster. If the frame had an area of 216 in^2 before and 864 in^2 after he enlarged it, what scale factor did the machine use? 2

10. A square with an area of 196 in^2 is reduced by a factor of $\frac{1}{2}$. How long are the new square's sides? 7 ft