## Lesson 14 Practice Problems

1. These two triangles are similar. What are $a$ and $b$ ? Note: the two figures are not drawn to scale.

2. Here is triangle $A B C$. Triangle $X Y Z$ is similar to $A B C$ with scale factor $\frac{1}{4}$.

a. Draw what triangle $X Y Z$ might look like.
b. How do the angle measures of triangle $X Y Z$ compare to triangle $A B C$ ? Explain how you know.
c. What are the side lengths of triangle $X Y Z$ ?
d. For triangle $X Y Z$, calculate (long side) $\div$ (medium side), and compare to triangle $A B C$.
3. The two triangles shown are similar. Find the value of $\frac{d}{c}$.

4. The diagram shows two nested triangles that share a vertex. Find a center and a scale factor for a dilation that would move the larger triangle to the smaller triangle.

(From Unit 2, Lesson 10.)
5. Which is a scaled copy of Polygon A? Identify a pair of corresponding sides and a pair of corresponding angles. Compare the areas of the scaled copies.

(From Unit 2, Lesson 2.)
6. A map of Colorado says that the scale is 1 inch to 20 miles or 1 to 1,267,200. Are these two ways of reporting the scale the same? Explain your reasoning.
