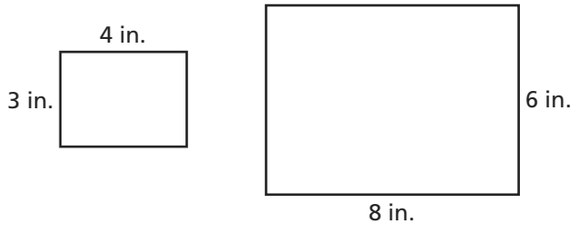
Math Background

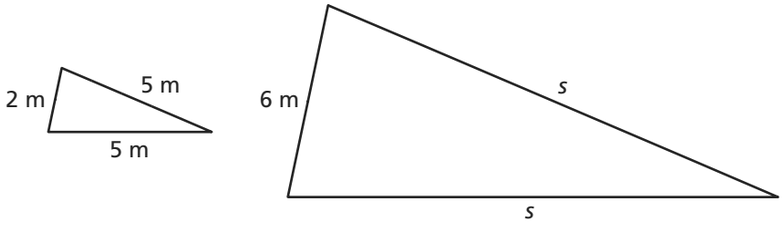
Similar Figures

Congruent figures have exactly the same measurements. Similar figures are different sizes, but they have sides in the same proportion.



These rectangles are similar.

As they begin this unit, students approach similarity from a qualitative point of view. If they hold two rectangles at different distances and the rectangles look "the same," the rectangles must be similar. Students soon learn that working with similar figures requires them to use the ratio and proportion skills they learned in Unit 6. For example, if you know the two triangles are similar, you can use a proportion to find the length of an unknown side.



$$\frac{2}{5} = \frac{6}{s},\ s = 15$$

Scale Drawings

One of the most common real-world applications of similar figures is scale drawings. Maps are a form of scale drawing. In a scale drawing a proportion is given, usually in the key. Students can measure lengths on the drawing and use the key to find the lengths in the real world. We use proportions in this way whenever we use a map to find out how far it is to our destination. Students can also measure objects in the real world and choose a proportion to help them create a scale drawing.