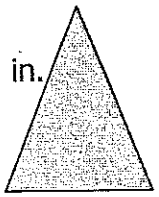
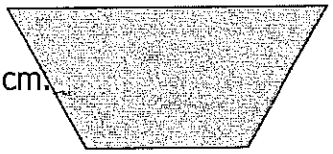
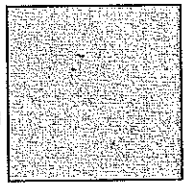
NAME_____

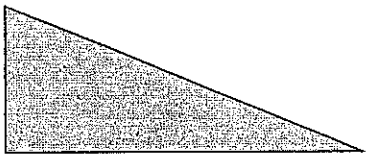
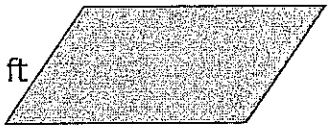
Area of Similar Figures Investigation

Consider the following similar figures. For each pair:

a. Find the scale factor of the side lengths.
(How many times bigger or smaller are the sides?)

b. Find the scale factor of the areas.
(How many times bigger or smaller are the areas?)

Side Length Scale Factor	**Area Scale Factor**	**Figure 1**	**Figure 2**
$\frac{10}{4} = \frac{5}{2}$	$\frac{50}{8} = \frac{25}{4}$	 Area = 50 in^2	 Area = 8 in^2
		 Area = 5 cm^2	 Area = 80 cm^2
		 Area = 80 m^2	 Area = 20 m^2
		 Area = 75 cm^2	 Area = 12 cm^2

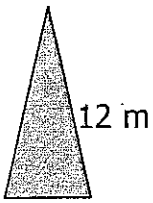
		 4 in. Area = 6 in^2	 12 in. Area = 54 in^2
		 6 ft Area = 45 ft^2	 4 ft Area = 20 ft^2

1. What do you notice about the relationship between side length scale factor and the area scale factor?

Class Rule:

2. Use what you just found regarding the relationship of side length scale factor and area scale factor to find a missing area in each pair of similar figures below.

a.

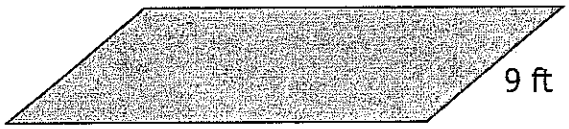


Area = 16 m^2

Area = _____

b.

Area = _____



Area = 100 ft^2

How can we check to see if the areas that we found are correct?