

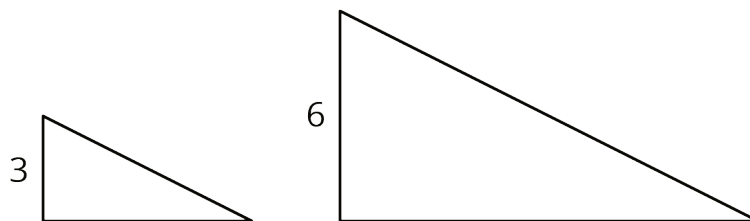
Lesson 12 Practice Problems

1. The Empire State Building in New York City is about 1,450 feet high (including the antenna at the top) and 400 feet wide. Andre wants to make a scale drawing of the front view of the Empire State Building on an $8\frac{1}{2}$ -inch-by-11-inch piece of paper. Select a scale that you think is the most appropriate for the scale drawing. Explain your reasoning.
 - a. 1 inch to 1 foot
 - b. 1 inch to 100 feet
 - c. 1 inch to 1 mile
 - d. 1 centimeter to 1 meter
 - e. 1 centimeter to 50 meters
 - f. 1 centimeter to 1 kilometer

2. Elena finds that the area of a house on a scale drawing is 25 square inches. The actual area of the house is 2,025 square feet. What is the scale of the drawing?

3. Which of these scales are equivalent to 3 cm to 4 km? Select **all** that apply. Recall that 1 inch is 2.54 centimeters.
 - A. 0.75 cm to 1 km
 - B. 1 cm to 12 km
 - C. 6 mm to 2 km
 - D. 0.3 mm to 40 m
 - E. 1 inch to 7.62 km

4. These two triangles are scaled copies of one another. The area of the smaller triangle is 9 square units. What is the area of the larger triangle? Explain or show how you know.



5. Water costs \$1.25 per bottle. At this rate, what is the cost of:
- 10 bottles?
 - 20 bottles?
 - 50 bottles?
6. The first row of the table shows the amount of dish detergent and water needed to make a soap solution.
- Complete the table for 2, 3, and 4 batches.
 - How much water and detergent is needed for 8 batches? Explain your reasoning.

number of batches	cups of water	cups of detergent
1	6	1
2		
3		
4		