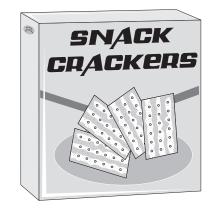
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Lesson 6 Homework Practice

Changes in Dimensions

- The surface area of a cube is 400 square millimeters. What is the surface area of a similar cube that is larger by a scale factor of 3?
 3,600 mm²
- CANDLES The volume of a candle is 8 cubic inches. What is the volume of a similar candle that is larger by a scale factor of 1.5? 27 in³
- **TRAVEL** The volume of a suitcase is 4.2 cubic feet. What is the volume of a suitcase that is smaller by a factor of 0.9? Round to the nearest tenth.
 3.1 ft³
- 4. DELI A deli owner uses 215 square centimeters of plastic wrap to cover a wedge of cheese. How many square centimeters of plastic wrap would she need to cover a wedge of cheese with a similar shape that is smaller by a scale factor of $\frac{1}{2}$? Round to the nearest tenth. 53.8 cm²
- **5. CRACKERS** A box of crackers has a volume of 48 cubic inches. What is the volume of a similar box that is smaller by a scale factor of $\frac{2}{3}$? **about 14.2 in³**
- 6. The surface area of a pyramid is 88 square feet.
 - a. What is the surface area of a similar pyramid that is larger by a scale factor of 5? 2,200 ft²
 - b. What is the surface area of a similar pyramid that is larger by a scale factor of 8? 5,632 ft²
 - **c.** What is the surface area of a similar pyramid that is smaller by a scale factor of $\frac{1}{10}$? Round to the nearest tenth. **0.9 ft**²
- 7. A cylinder was enlarged by a scale factor of 4. The new volume is 2,240 cubic units. What was the volume of the original cylinder?
 35 units³



PERIOD