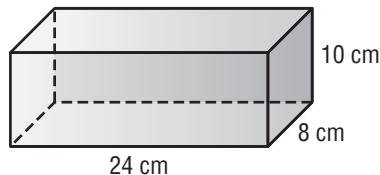# Lesson 6 Skills Practice

Changes in Dimensions

1. A cube has a surface area of 150 square inches. What is the surface area of a similar cube that is larger by a scale factor of 2? **600 in²**

2. The surface area of a triangular prism is 60 square centimeters. What is the surface area of a similar prism that is smaller by a scale factor of $\frac{1}{5}$? **2.4 cm²**

3. **MAIL** A shipping box has a surface area of 320 square inches. What is the surface area of a similar box that is larger by a scale factor of 1.2?
460.8 in²

4. **CANS** A can of food has a volume of 344 cubic centimeters. What is the volume of a similar can that is smaller by a scale factor of $\frac{1}{2}$? **43 cm³**

5. A cone has a volume of 7,560 cubic millimeters. What is the volume of a similar cone that is one sixth the size of this cone? **35 mm³**

6. A pyramid has a surface area of 539 square feet. What is the surface area of a similar pyramid that is smaller by a scale factor of $\frac{1}{7}$? **11 ft²**

7. **ART** The volume of a clay sculpture is 540 cubic inches. What is the volume of a similar sculpture that is larger by a scale factor of 2.5? **8,437.5 in³**

Use the rectangular prism for Exercises 8 and 9.

8. Find the surface area and volume for a rectangular prism that is larger than the one shown by a scale factor of 10. **102,400 cm²; 1,920,000 cm³**

10 cm

8 cm

24 cm

9. Find the surface area and volume for a rectangular prism that is smaller than the one shown by a scale factor of $\frac{1}{10}$. Round to the nearest tenth.
10.2 cm²; 1.9 cm³