

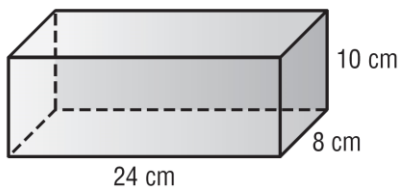
# Lesson 6 Skills Practice

## 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?
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  $\frac{1}{5}$ ?
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?
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  $\frac{1}{2}$ ?
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?
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  $\frac{1}{7}$ ?
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 ?

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.



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.