NAME _____ DATE _____ PERIOD _____

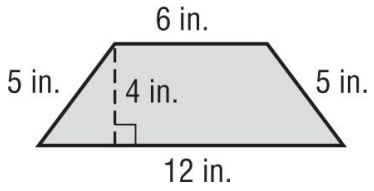
Lesson 4 Skills Practice

ALL

Changes in Dimension

For Exercises 1 and 2, each side length in the figure at the right is doubled. Justify your answers.

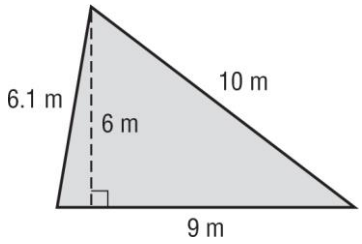
1. Describe the change in the perimeter.



2. Describe the change in the area.

For Exercises 3 and 4, each side length in the figure at the right is multiplied by 5. Justify your answers.

3. Describe the change in the perimeter.



4. Describe the change in the area.

5. A photo album contains small and large photographs. Each large photograph has side lengths that are twice the side lengths of each small photograph. The area of each small photograph is 24 square inches. What is the area of each large photograph? Explain.

NAME _____ DATE _____ PERIOD _____

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 $\frac{1}{2}$?

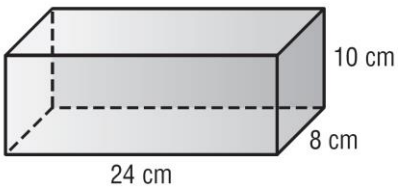
5. A cone has a volume of 7,560 cubic millimeters. What is the volume of a similar cone that is one sixth the size of this cone?

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.