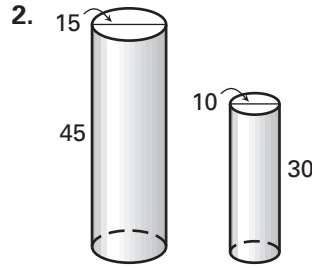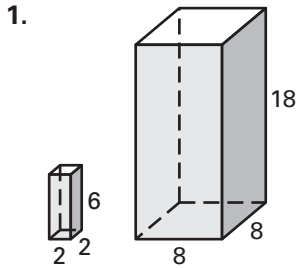NAME _____ DATE _____

Practice A

For use with pages 766–772

Decide whether the solids are similar. If so, determine the scale factor.

1.

2.

In Exercises 3–7, use the diagram at the right.

3. What is the ratio of the height of the larger cylinder to the height of the smaller cylinder?

4. What is the ratio of the radius of the larger cylinder to the radius of the smaller cylinder?

5. Find the ratio of the circumference of the bases.

6. Find the ratio of the surface areas of the cylinders.

7. Find the ratio of the volumes of the cylinders.
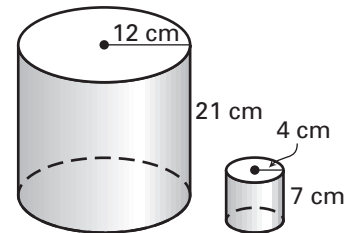
The solid is similar to a larger solid with the given scale factor. Find the surface area *S* and volume *V* of the larger solid.
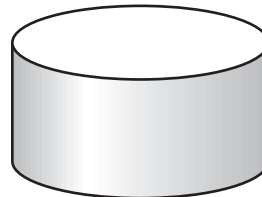
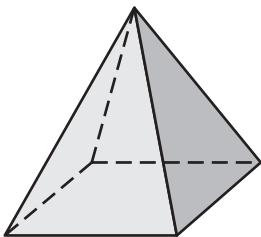**8.** Scale factor 1:2
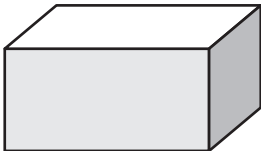
$S = 208$ in.^{2}

$V = 192$ in.^{3}

9. Scale factor: 1:3

$S = 108\pi$ in.^{2}

$V = 108\pi$ in.^{3}

10. Scale factor: 1:4

$S = 154$ cm^2

$V = 64$ cm^3

11. Scale factor 2:3
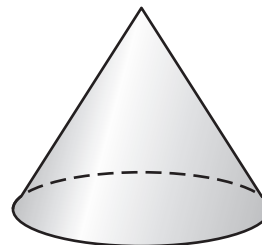
$S = 90\pi$ cm^2

$V = 100\pi$ cm^3

12. *Model Train*   A toy model of a train is built with a scale of 1:12. If the model has a surface area of 94 square inches, what is the surface area of the actual train?

Lesson 12.7