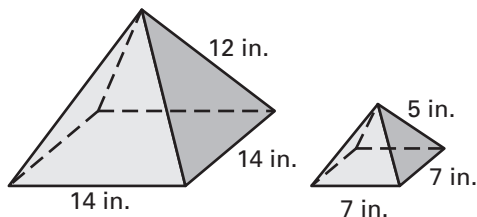


Practice B

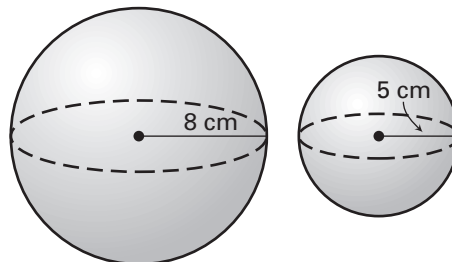
For use with pages 766–772

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

1.

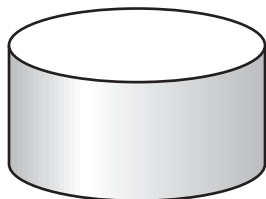


2.



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.

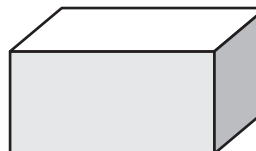
3. Scale factor 1:2



$$S = 208\pi \text{ in.}^2$$

$$V = 320\pi \text{ in.}^3$$

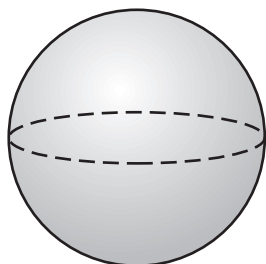
4. Scale factor: 1:3



$$S = 398 \text{ in.}^2$$

$$V = 495 \text{ in.}^3$$

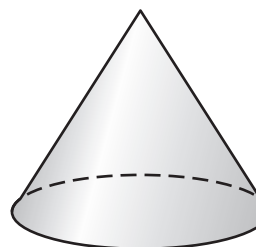
5. Scale factor: 2:3



$$S = 144\pi \text{ cm}^2$$

$$V = 288\pi \text{ cm}^3$$

6. Scale factor 3:4



$$S = 96\pi \text{ cm}^2$$

$$V = 96\pi \text{ cm}^3$$

In Exercises 7–12, you and your friends decide to make a scale model of the water tower in your town.

7. You decide that 0.25 inch in your model will correspond to 12 inches of the actual water tower. What is the scale factor?
8. The top of the water tower has a diameter of 20 feet. Find the surface area of the top.
9. You decide to make the top of the water tower with silver foil. How many square inches of foil will you need?
10. The height of the actual water tower is 32 feet. What is the surface area of your scale model? Do not include the bottom base.
11. Find the volume of the actual water tower.
12. Use your result from Exercise 11 to find the volume of the scale model.

