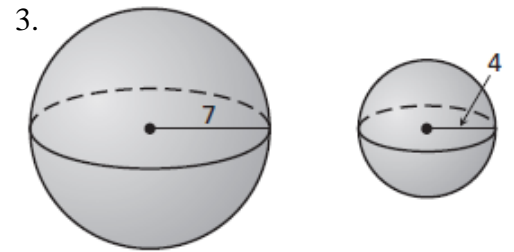
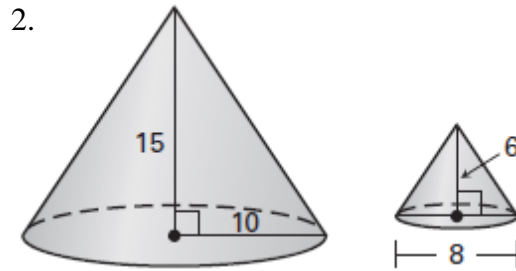
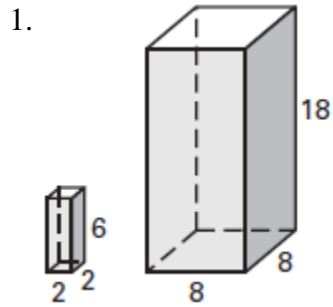


Name \_\_\_\_\_ Hour \_\_\_\_\_

Are the solids similar? If so, find the scale factor.



4. Two similar cylinders have radii of 3 ft and 5 ft. What is the ratio of their volumes?

5. Two similar pyramids have heights of 9 cm and 7 cm. What is the ratio of their surface areas?

6. Two similar spheres have radii of 14 in. and 28 in. What is the ratio of their volumes?

7. Two similar cones have heights of 24 mm and 6 mm. What is the ratio of their surface areas?

8. A cylinder has a surface area of  $75\pi \text{ cm}^2$ . A similar cylinder has a surface area of  $108\pi \text{ cm}^2$ . What is the ratio of the radii of the similar cylinders?

## Similar Solids

9. A cube has a volume of  $1331 \text{ in.}^3$ . A similar cube has a volume  $343 \text{ in.}^3$ . What is the ratio of the side lengths of the similar cubes?
  
  
  
  
  
  
  
  
  
  
10. The ratio of the surface areas of two similar cones is 169 to 289. What is the ratio of the volumes?
  
  
  
  
  
  
  
  
  
  
11. The ratio of the volumes of two similar cylinders is 729 to 64. What is the ratio of the surface areas?
  
  
  
  
  
  
  
  
  
  
12. The scale factor of two similar spheres is 6 to 1. The surface area of the larger sphere is  $1296\pi \text{ m}^2$ . What is the surface area of the smaller sphere?
  
  
  
  
  
  
  
  
  
  
13. The scale factor of two similar prisms is 3 to 8. The volume of the smaller prism is  $324 \text{ yd}^3$ . What is the volume of the larger prism?
  
  
  
  
  
  
  
  
  
  
14. Two similar square pyramids have base edges of 20 ft and 12 ft. If the surface area of the smaller pyramid is  $504 \text{ ft}^2$ , what is the surface area of the larger pyramid?
  
  
  
  
  
  
  
  
  
  
15. Two similar cones have radii of 24 mm and 36 mm. If the volume of the larger cone is  $19440\pi \text{ mm}^3$ , what is the volume of the smaller cone?