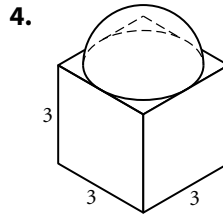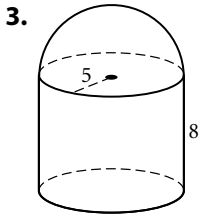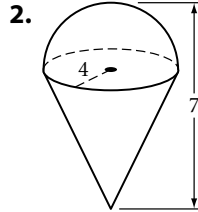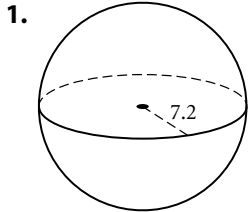# Lesson 11.7 • Surface Area of a Sphere

Name _____ **Period** _____ **Date** _____

In Exercises 1–4, find the volume and total surface area of each solid.
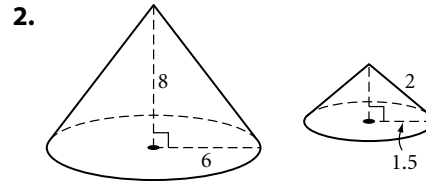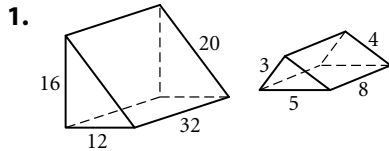All measurements are in centimeters. Round your answers to the nearest
0.1 cm.

1.

2.

3.

4.

5. If the surface area of a sphere is 48.3 cm^2, find its diameter.

6. If the volume of a sphere is 635 cm^3, find its surface area.

7. Lobster fishers in Maine often use spherical buoys to mark their lobster
traps. Every year the buoys must be repainted. An average buoy has a
12 in. diameter, and an average fisher has about 500 buoys. A quart of
marine paint covers 175 ft^2. How many quarts of paint does an average
fisher need each year?

Lesson 11.8 • Similarity and Volume

Name_____ **Period**_____ **Date**_____
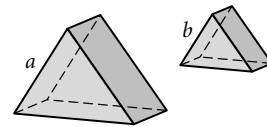
All measurements are in centimeters unless otherwise indicated.

In Exercises 1 and 2, decide whether or not the two solids are similar.

1.

2.

3. The triangular prisms are similar and the ratio of a to b is $\frac{5}{2}$.

Volume of large prism $= 250$ cm^3
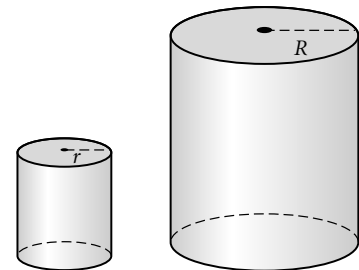
Volume of smaller prism $=$ _____

4. The right cylinders are similar and $r = 10$ cm.

Volume of large cylinder $= 64$ cm

Volume of small cylinder $= 8$ cm

$R =$ _____

5. The corresponding heights of two similar cylinders is $2:5$. What is the ratio of their volumes?

6. A rectangular prism aquarium holds 64 gallons of water. A similarly shaped aquarium holds 8 gallons of water. If a 1.5 ft^2 cover fits on the smaller tank, what is the area of a cover that will fit on the larger tank?