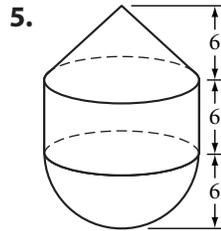
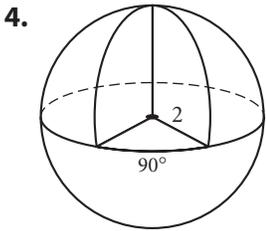
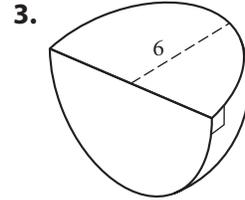
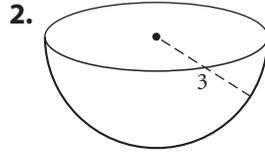
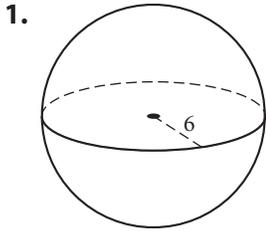


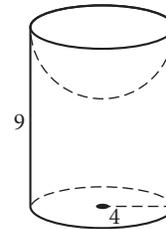
Lesson 10.6 • Volume of a Sphere

Name _____ Period _____ Date _____

In Exercises 1–6, find the volume of each solid. All measurements are in centimeters. Write your answers in exact form and rounded to the nearest 0.1 cm^3 .



6. Cylinder with hemisphere taken out of the top



7. A sphere has volume $221\frac{5}{6}\pi \text{ cm}^3$. What is its diameter?
8. The area of the base of a hemisphere is $225\pi \text{ in}^2$. What is its volume?
9. Eight wooden spheres with radii 3 in. are packed snugly into a square box 12 in. on one side. The remaining space is filled with packing beads. What is the volume occupied by the packing beads? What percentage of the volume of the box is filled with beads?
10. The radius of Earth is about 6378 km, and the radius of Mercury is about 2440 km. About how many times greater is the volume of Earth than that of Mercury?