

NAME \_\_\_\_\_

Module 13 Perimeter, Area, and Volume  
Lesson 5 Volume: Prisms, Cylinders, and Spheres

# Guided Practice 13.5

## Set 1

- 1 Find the volume of the 20-inch storage cube.

$$\begin{aligned}V &= e^3 \\V &= (20 \text{ in.})^3 \\V &= 8,000 \text{ in.}^3\end{aligned}$$

The volume of the storage cube is 8,000 in<sup>3</sup>.



- 2 Find the volume of the rectangular prism semi-truck trailer.

$$\begin{aligned}V &= lwh \\V &= 40 \text{ ft} \times 8 \text{ ft} \times 13 \text{ ft} \\V &= 4,160 \text{ ft}^3\end{aligned}$$



## Set 2

- 1 Find the volume of a cylindrical water heater with a diameter of 20 inches and a height of 59 inches.

$$\begin{aligned}V &= \pi r^2 h \\&= 3.14 \times (10 \text{ in.})^2 \times 59 \text{ in.} \\&\approx 18,526 \text{ in.}^3\end{aligned}$$



2

Find the volume of the spherical soccer ball with a radius of 11 centimeters.



$$\begin{aligned}V &= \frac{4}{3}\pi r^3 \\ &= \frac{4}{3} \times (3.14) \times (11\text{ cm})^3 \\ &\approx 5,572.45\text{ cm}^3\end{aligned}$$