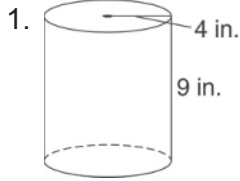


**LESSON**  
**13-1**

**Volume of Cylinders**

*Practice and Problem Solving: D*

Find the volume of each cylinder. Round your answer to the nearest tenth if necessary. Use 3.14 for  $\pi$ . Show your work by filling in the blanks with values from the diagrams. The first one is done for you.

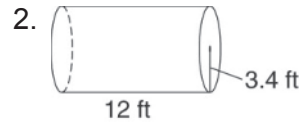


$$V = \pi r^2 h$$

$$V = \underline{3.14} \cdot \underline{4^2} \times \underline{9}$$

$$V = \underline{3.14} \cdot \underline{16} \times \underline{9}$$

$$V \approx \underline{452.2 \text{ in}^3}$$



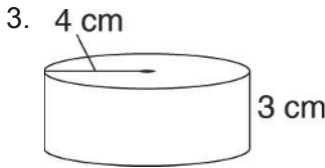
$$V = \pi r^2 h$$

$$V = \underline{3.14} \cdot \underline{3.4 \cdot 3.4} \cdot \underline{12}$$

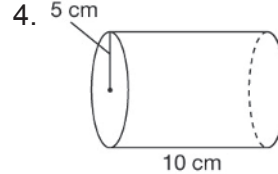
$$V = \underline{3.14} \cdot \underline{11.56} \cdot \underline{12}$$

$$V \approx \underline{435.6 \text{ inches cubed}}$$

Find the volume of each cylinder. Round your answer to the nearest tenth if necessary. Use 3.14 for  $\pi$ . The first one is done for you.



$$\underline{150.7 \text{ cm}^3}$$



$$\underline{785 \text{ cm cubed}}$$

**Solve. The first one is done for you.**

5. A can of beans is 4.5 inches high and has a diameter of 3 inches Find the volume of the can to the nearest tenth of a unit. Use 3.14 for  $\pi$ .

$$\underline{31.8 \text{ in}^3}$$

6. A telephone pole is 30 feet tall with a diameter of 12 inches. Jacob is making a replica of a telephone pole and wants to fill it with sand to help it stand freely. Find the volume of his model, which has a height of 30 inches and a diameter of 1 inch, to the nearest tenth of a unit. Use 3.14 for  $\pi$ .

$$\underline{23.6 \text{ inches cubed}}$$

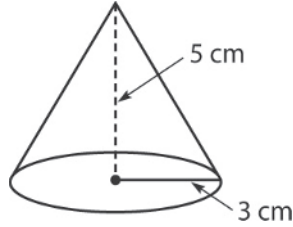
**LESSON**  
**13-2**

**Volume of Cones**

*Practice and Problem Solving: D*

Find the volume of each cone. Round your answer to the nearest tenth if necessary. Use 3.14 for  $\pi$ . Show your work by filling in the blanks with values from the diagrams. The first one is done for you.

1.



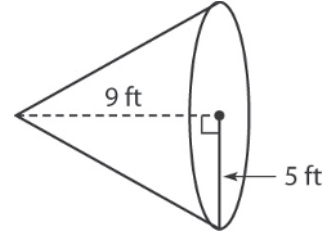
$$V = \frac{1}{3} \pi r^2 h$$

$$V = \frac{1}{3} \cdot \underline{3.14} \cdot \underline{3^2} \times \underline{5}$$

$$V = \frac{1}{3} \cdot \underline{3.14} \cdot \underline{9} \times \underline{5}$$

$$V = \underline{47.1 \text{ cm}^3}$$

2.



$$V = \frac{1}{3} \pi r^2 h$$

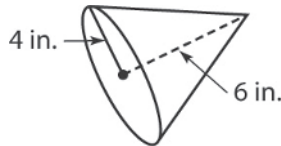
$$V = \frac{1}{3} \cdot \underline{3.14} \cdot \underline{5 \cdot 5} \times \underline{9}$$

$$V = \frac{1}{3} \cdot \underline{3.14} \cdot \underline{25} \times \underline{9}$$

$$V = \underline{235.5 \text{ feet cubed}}$$

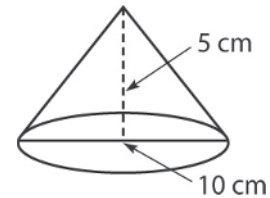
Find the volume of each cone. Round your answer to the nearest tenth if necessary. Use 3.14 for  $\pi$ . The first one is done for you.

3.



$$\underline{100.5 \text{ in}^3}$$

4.



$$\underline{130.8 \text{ cm cubed}}$$

**Solve. The first one is done for you.**

5. A cone has a diameter of 4 cm and a height of 11 cm. What is the volume of the cone to the nearest tenth? Use 3.14 for  $\pi$ .

$$\underline{46.1 \text{ cm}^3}$$

6. A cloth pastry bag is shaped like a cone. It has a radius of 1.5 inches and a height of 8.5 inches. What is the volume of the pastry bag to the nearest tenth? Use 3.14 for  $\pi$ .

$$\underline{20 \text{ inches cubed}}$$

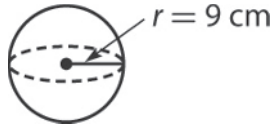
**LESSON**  
**13-3**

**Volume of Spheres**

*Practice and Problem Solving: D*

Find the volume of each sphere. Round your answer to the nearest tenth if necessary. Use 3.14 for  $\pi$ . Show your work by filling in the blanks with values from the diagrams. The first one is done for you.

1.



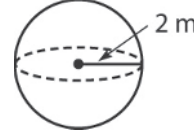
$$V = \frac{4}{3} \pi r^3$$

$$V = \frac{4}{3} \cdot \underline{3.14} \cdot \underline{9^3}$$

$$V = \frac{4}{3} \cdot \underline{3.14} \cdot \underline{729}$$

$$V \approx \underline{3,052.1 \text{ cm}^3}$$

2.



$$V = \frac{4}{3} \pi r^3$$

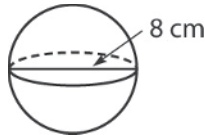
$$V = \frac{4}{3} \cdot \underline{3.14} \cdot \underline{2 \cdot 2 \cdot 2}$$

$$V = \frac{4}{3} \cdot \underline{3.14} \cdot \underline{8}$$

$$V = \underline{33.5 \text{ meter cubed}}$$

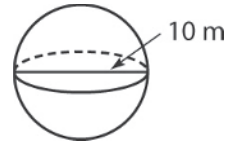
Find the volume of each sphere. Round your answer to the nearest tenth if necessary. Use 3.14 for  $\pi$ . The first one is done for you.

3.



$$\underline{267.9 \text{ cm}^3}$$

4.



$$\underline{523.3 \text{ cm cubed}}$$

**Solve. The first one is done for you.**

5. What is the volume to the nearest tenth of a spherical scoop of frozen yogurt with a diameter of 5.6 cm? Use 3.14 for  $\pi$ .

$$\underline{91.9 \text{ cm}^3}$$

6. Mike makes homemade apple lollipops. Each lollipop has a diameter of 2 in. What is the volume of the lollipop to the nearest tenth? Use 3.14 for  $\pi$ .

$$\underline{4.2 \text{ inches cubed}}$$