

Name: _____



PRACTICE



TUTORIAL

8-2 Additional Practice

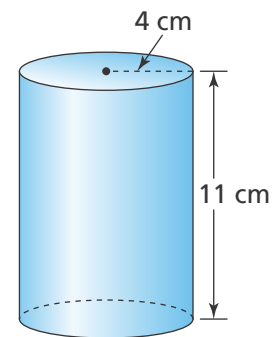
- 1. Leveled Practice** What is the volume of the cylinder?

Use 3.14 for π .

$$\begin{aligned} V &= \pi \cdot \boxed{}^2 \cdot \boxed{} \\ &= \pi \cdot \boxed{} \cdot \boxed{} \\ &= \boxed{} \pi \end{aligned}$$

The volume of the cylinder is about $\boxed{}$ cubic centimeters.

Scan for
Multimedia



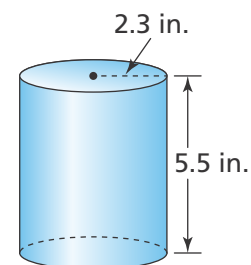
- 2.** The volume of the cylinder is 48π cubic feet. The area of the base is 12π square feet. What is the height of the cylinder?

- 3.** You are building a sand castle and want to use a cylindrical bucket that holds 885 cubic inches of sand. If the bucket has a height of 11.7 inches, what is the radius of the bucket? Use 3.14 for π , and round to the nearest tenth.

- 4.** A cylinder has radius 2.3 inches and height 5.5 inches.

- a.** Find the volume of the cylinder. Use 3.14 for π , and round to the nearest tenth.

- b. Reasoning** If the radius of the cylinder is changed, but the height remains the same, how will the volume change? © MP.2



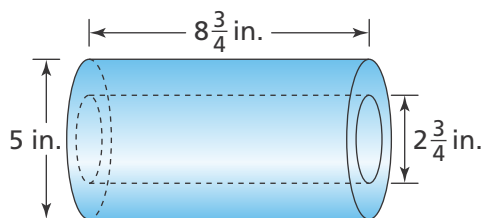
5. **Critique Reasoning** Claire says that she can find the volume of any cylinder as long as she can measure the circumference and height. Is Claire correct? Explain. ©MP.3

6. Find the volume of each cylinder in terms of π . Which cylinder has the greatest volume?

Cylinder A: diameter = 7 in., height = 12 in.

Cylinder B: diameter = 12 in., height = 7 in.

7. **Higher Order Thinking** The cylinder shown is a steel tube that weighs 0.2835 pound per cubic inch. The inner part of the tube is hollow. What is the weight of the tube? Use 3.14 for π , and round to the nearest tenth.



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8. The diameter of a cylinder is $(6x - 8)$ inches and the height of the cylinder is $(11x + 10)$ inches. Find the volume of the cylinder when $x = 7$ in terms of π . Explain.

9. The volume of a cylinder is $4,000\pi$ cubic inches. The height of the cylinder is 250 inches. What is the radius of the cylinder?

