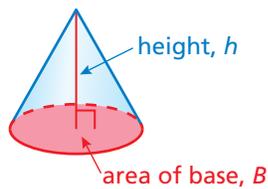


REVIEW: Volumes of Cones

Name _____

Key Concept and Vocabulary

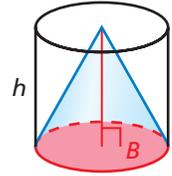


$$V = \frac{1}{3} Bh$$



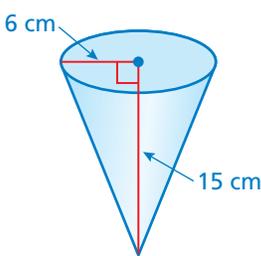
Visual Model

The volume of a cone is *one-third* the volume of the cylinder that has the same base and height.



Skill Example

1.

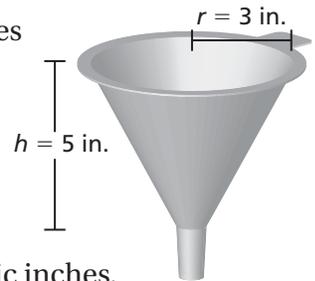


$$\begin{aligned} V &= \frac{1}{3} Bh \\ &= \frac{1}{3} \cdot (\pi \cdot 6^2) \cdot 15 \\ &= 180\pi \text{ cm}^3 \end{aligned}$$

Application Example

2. How much water does the funnel hold?

$$\begin{aligned} V &= \frac{1}{3} \cdot (\pi \cdot 3^2) \cdot 5 \\ &= 15\pi \text{ in.}^3 \end{aligned}$$



It holds 15π cubic inches.

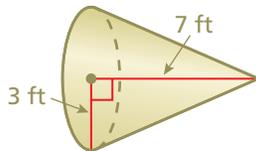
PRACTICE MAKES PURR-FECT™



Check your answers at BigIdeasMath.com.

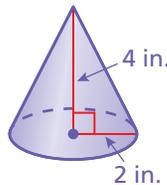
Find the volume of the cone.

3.



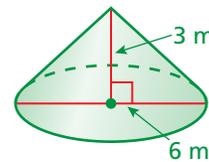
$$V = 21\pi \text{ ft}^3$$

4.



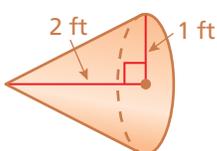
$$V = 5\frac{1}{3}\pi \text{ in.}^3$$

5.



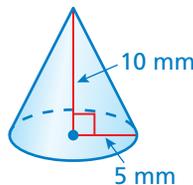
$$V = 9\pi \text{ m}^3$$

6.



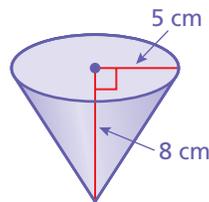
$$V = \frac{2}{3}\pi \text{ ft}^3$$

7.



$$V = 83\frac{1}{3}\pi \text{ mm}^3$$

8.



$$V = 66\frac{2}{3}\pi \text{ cm}^3$$

9.

LEMONADE You have 10 gallons of lemonade (1 gal \approx 3785 cm^3) How many of the paper cups should you order? Explain. at least 206 paper cups; One cup holds $\frac{1}{3} \cdot 3.14 \cdot 4^2 \cdot 11 \approx 184 \text{ cm}^3$.

You need $3785 \cdot 10 \div 184 \approx 206$ paper cups.

