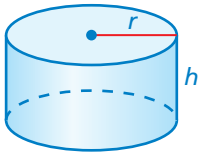
REVIEW: Volumes of Cylinders

Name _____

Key Concept and Vocabulary

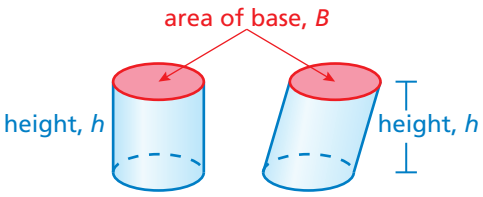


Area of base

$V = Bh$

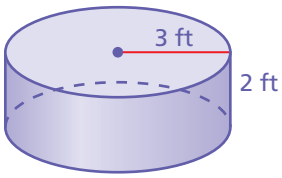
$= \pi r^2 h$

Visual Model



Skill Example

1.



$V = \pi \cdot 3^2 \cdot 2$

$= 18\pi \text{ ft}^3$

Application Example

2. How much soup is in the can?

$V = \pi \cdot 1.5^2 \cdot 5$

$= 11.25\pi$

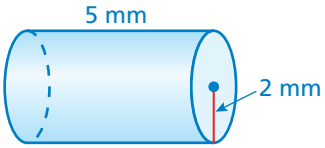
∴ There are 11.25π cubic inches of soup.

PRACTICE MAKES *PURR*-FECT®

Check your answers at BigIdeasMath.com.

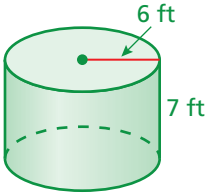
Find the volume of the cylinder.

3.



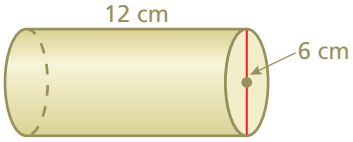
$V =$ $20\pi \text{ mm}^3$

4.



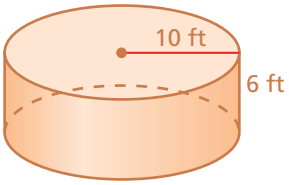
$V =$ $252\pi \text{ ft}^3$

5.



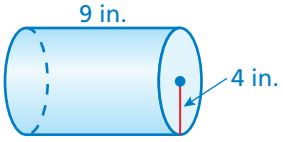
$V =$ $108\pi \text{ cm}^3$

6.



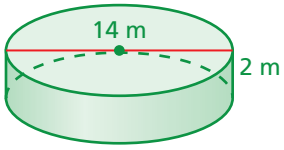
$V =$ $600\pi \text{ ft}^3$

7.



$V =$ $144\pi \text{ in.}^3$

8.



$V =$ $98\pi \text{ m}^3$

9. OIL TANKER TRUCK The truck's tank is a stainless steel cylinder. How much oil can the tank hold?

$800\pi \text{ ft}^3$

10. OIL TANKER TRUCK There are about 7.5 gallons in 1 cubic foot. How many gallons of oil can the tank hold?

about 18,840 gal

Length = 50 ft
Radius = 4 ft