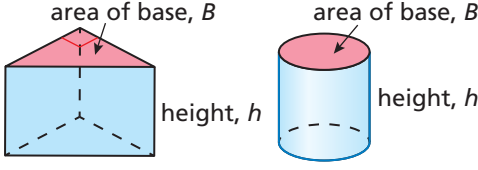
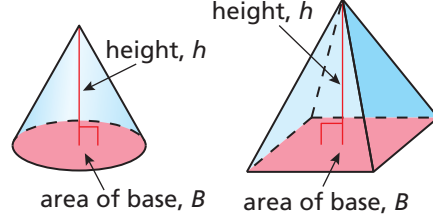
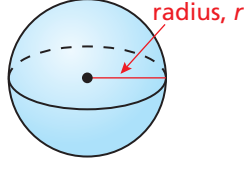
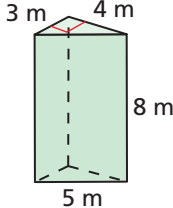


# Volume

A **volume** of a solid is a measure of the amount of space that it occupies. Volume is measured in *cubic units*. You can use the following formulas to find volumes.

Prism and Cylinder	Cone and Pyramid	Sphere
 <p style="text-align: center;"><math>V = Bh</math></p>	 <p style="text-align: center;"><math>V = \frac{1}{3}Bh</math></p>	 <p style="text-align: center;"><math>V = \frac{4}{3}\pi r^3</math></p>

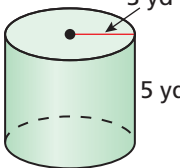
**Example 1** Find the volume of each solid.

a.   $V = Bh$

$$= \frac{1}{2}(3)(4) \cdot 8$$

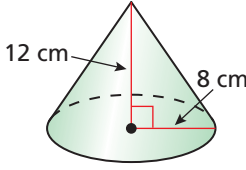
$$= 6 \cdot 8$$

$$= 48 \text{ m}^3$$

b.   $V = Bh$

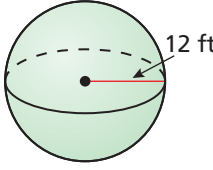
$$= \pi(3)^2 \cdot 5$$

$$= 45\pi \approx 141 \text{ yd}^3$$

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

$$= \frac{1}{3}\pi(8)^2 \cdot 12$$

$$= 256\pi \approx 804 \text{ cm}^3$$

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

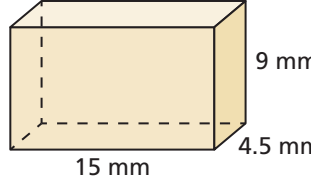
$$= \frac{4}{3}\pi(12)^3$$

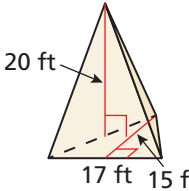
$$= 2304\pi \approx 7238 \text{ ft}^3$$

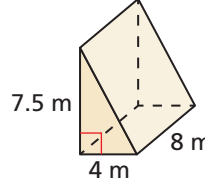
## Practice

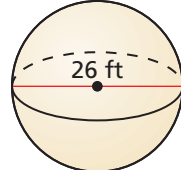
Check your answers at [BigIdeasMath.com](http://BigIdeasMath.com).


Find the volume of the solid.

1. 

2. 

3. 

4. 

5. 

6. 