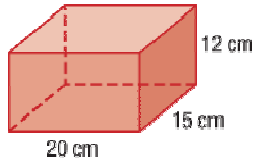


## Lesson 10-7

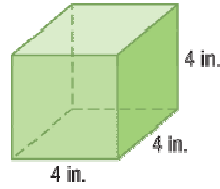
## Example 1

Find the volume of each prism.

a.



b.



## Solution

a. The base is a rectangle.

$$B = 20 \cdot 15$$

$$B = 300$$

Use the volume formula.

$$V = 300 \cdot 12$$

$$V = 3600$$

The volume is  $3,600 \text{ cm}^3$ .

b. The base is a square.

$$B = 4^2$$

$$B = 16$$

Use the volume formula.

$$V = 16 \cdot 4$$

$$V = 64$$

The volume is  $64 \text{ in}^3$ .

## Example 2

Find the volume of the triangular prism.

## Solution

The base is a right triangle.

$$B = \frac{1}{2} \cdot 4 \cdot 5$$

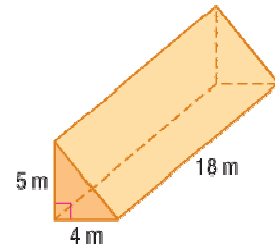
$$B = 10$$

Use the volume formula.

$$V = 10 \cdot 18$$

$$V = 180$$

The volume is  $180 \text{ m}^3$ .



**Example 3**

**CONSTRUCTION** A storage shed that is shaped like a rectangular prism has  $900 \text{ ft}^3$  of volume. The shed is 7.5 ft tall and 10 ft deep. How wide is the storage shed?

**Solution**

Use the volume formula for a rectangular prism.

$$900 = 10 \cdot w \cdot 7.5$$

$$900 = 75w$$

$$\frac{900}{75} = \frac{75w}{75}$$

$$12 = w$$

The storage shed is 12 ft wide.

**Example 4**

**Find the volume of the rectangular pyramid.**

**Solution**

Find the area of the rectangular base.

$$B = 18 \cdot 16$$

$$B = 288$$

Use the volume formula.

$$V = \frac{1}{3} \cdot 288 \cdot 24$$

$$V = 2304$$

The volume of the pyramid is  $2304 \text{ ft}^3$ .

