

## Lesson 4-8

**Example 1**

A square pyramid has a base 3 m on a side. Its height is 10 m. Find the volume.

**Solution**

Use the volume formula for a pyramid.

$$V = \frac{1}{3} \cdot B \cdot h$$

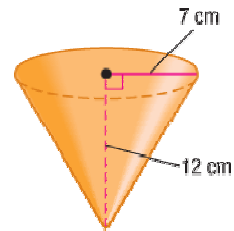
$$V = \frac{1}{3} \cdot (3 \cdot 3) \cdot 10$$

$$V = 30$$

The volume of the pyramid is 30 m<sup>3</sup>.

**Example 2**

Find the volume of the cone. Use  $\pi \approx 3.14$  and round to the nearest tenth.

**Solution**

Use the volume formula for a cone.

$$V = \frac{1}{3}\pi r^2 \cdot h$$

$$V = \frac{1}{3}\pi(7)^2 \cdot 12$$

$$V \approx \frac{1}{3} \cdot 3.14 \cdot 49 \cdot 12$$

$$V \approx 615.4$$

The volume of the cone is about 615.4 cm<sup>3</sup>.

**Example 3**

To the nearest hundredth, find the volume of a cone-shaped party hat with a height of 7.5 in. and a radius of 3.5 in.

**Solution**

Use the volume formula for a cone.

$$V = \frac{1}{3}\pi r^2 \cdot h$$

$$V = \frac{1}{3}\pi(3.5)^2 \cdot 7.5$$

$$V = \frac{1}{3} \cdot 3.14 \cdot 12.25 \cdot 7.5$$

$$V \approx 96.16$$

The volume of the hat is about 96.16 in<sup>3</sup>.