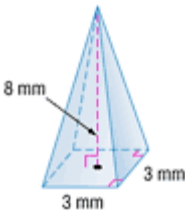


### Lesson 11-3

#### Example 1 Volume of Pyramids

Find the volume of each pyramid. If necessary, round to the nearest tenth.

a.   $V = \frac{1}{3}Bh$  Formula for volume of a pyramid

$V = \frac{1}{3}(3 \cdot 3)h$  The base is a square, so  $B = 3 \cdot 3$ .

$V = \frac{1}{3}(3 \cdot 3)8$  The height of the pyramid is 8 mm.

$V = 24$  Simplify.

The volume is 24 cubic millimeters.

b. base area  $72 \text{ in}^2$ , height 3.2 in.

$V = \frac{1}{3}Bh$  Formula for volume of a pyramid

$V = \frac{1}{3}(72)(3.2)$  Replace  $B$  with 72 and  $h$  with 3.2.

$V = 76.8$  Simplify.

The volume is 76.8 cubic inches.

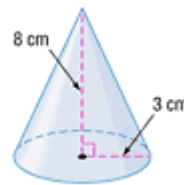
#### Example 2 Volume of a Cone

Find the volume of the cone. Round to the nearest tenth.

$V = \frac{1}{3}\pi r^2 h$  Formula for volume of a cone

$V = \frac{1}{3} \cdot \pi \cdot 3^2 \cdot 8$  Replace  $r$  with 3 and  $h$  with 8.

$V \approx 75.4$  Simplify.



The volume is about 75.4 cubic centimeters.

**Example 3**            **Use Volume to Solve Problems**

**SCULPTURE**        **A new sculpture to be placed outside of City Hall is a rectangular pyramid with base having length 9 feet and width 5 feet, and a height of 12 feet. Find the volume of the new sculpture.**

$V = (\ell \cdot w)h$             Volume of a rectangular pyramid

$V = (9)(5)(12)$         Replace  $\ell$  with 9,  $w$  with 5, and  $h$  with 12.

$V = 540$                 Simplify.

The volume of the new sculpture is 540 cubic feet.