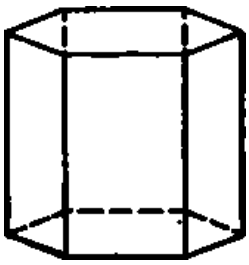
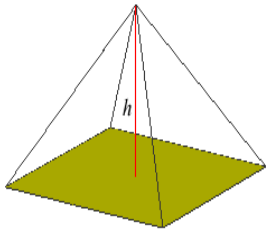
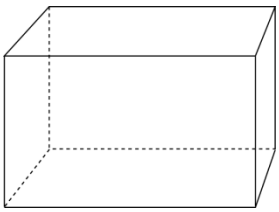
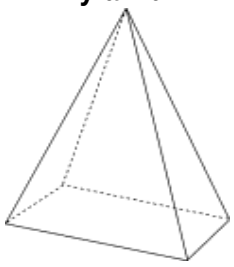
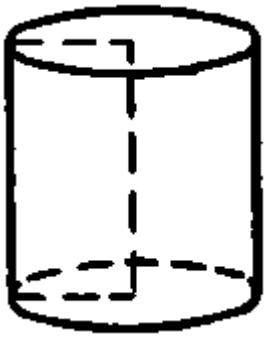
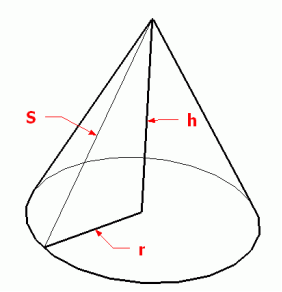
# Volumes of Right Pyramids and Right Cones

## General Rule of Thumb:

****The volume of a right pyramid or right cone is one-third the volume of the right prism or right cylinder with the same base and the same height. ****

| Object | Volume | Object | Volume |
|---|---|---|---|
| Right Prism  | V = (base area)(height) | Right Pyramid   | V = ⅓(base area)(height) |
| Right Rectangular Prism  | V = lwh | Right Rectangular Pyramid  | V = ⅓lwh |
| Right Cylinder  | $V = \pi r^2 h$ | Right Cone   | $V = \frac{1}{3}\pi r^2 h$ |

**NOTE: VOLUME IS ALWAYS MEASURED IN CUBIC UNITS!!!**

**Example 1: Determining the Volume of a Right Square Pyramid**

Calculate the volume of a right square pyramid with a base of 5 ft. and a slant height of 8 ft.

**Example 2: Determining the Volume of a Right Rectangular Pyramid**

Calculate the volume of a right rectangular pyramid with a base dimensions of 4.8-m by 5.6-m and height of 27.5-m.

**Example 3: Determining the Volume of a Right Cone**

Calculate the volume of a right cone with a diameter of 16.2-cm and a slant height of 24.6-cm.

**Example 4: Determining an Unknown Measurement**

A rectangular pyramid can hold 1250 cubic feet of water. The base of the pyramid is 15 ft. by 10 ft. What is the height of the pyramid?