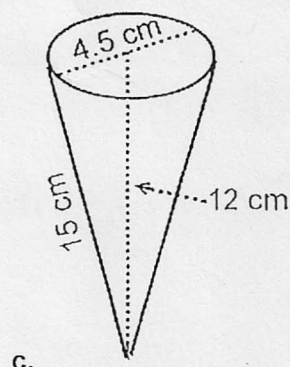
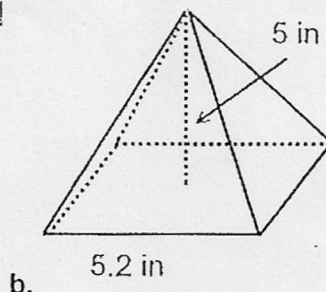
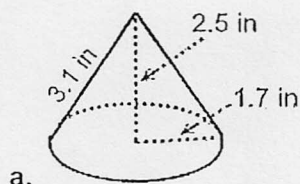


# Volume of Cones and Pyramids

$$\text{Volume} = \frac{1}{3} \times \text{area of base} \times \text{height}$$

1. Find the volume of these objects.



2. If you have a cube with 6 inch sides, and a square pyramid that fits right inside of it so that the base of the pyramid sits in the bottom of the cube, and the peak of the pyramid just touches the top side of the cube, what is the volume of the pyramid?

3. Find the volumes.

- a straight cone that is 11 cm tall, and its base is a circle with a 5 cm diameter.
- a square pyramid with 4 cm sides in the base, and height of 10 cm.

- Sketch the cone and the pyramid in 3. a) and in 3. b).
- Find their volumes in milliliters. Which one has the larger volume? What is the difference?

5. An ice cream cone is 12 cm tall and has a circle with 5.5 cm diameter. On top of that cone, there is more ice cream in a cylindrical shape. The cylinder of ice cream has the same circle as its base and is 4 cm tall. Find the total volume of ice cream.

6. A juice company plans to sell a new 'hit' juice in three different containers:

- a 10 cm tall can (cylinder), which has a 5 cm-diameter circle as a base
- a 9 cm tall square pyramid whose bottom sides are 9 cm each
- a box with dimensions 4 cm  $\times$  6 cm  $\times$  8 cm

- Find the volumes of them all and put them in order from the smallest volume to the greatest.
- If the juice is supposed to be sold at the unit rate of \$5 per liter, what would the price be for the three containers of juice?

