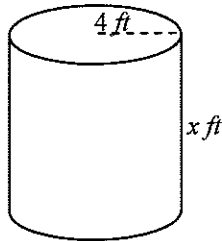
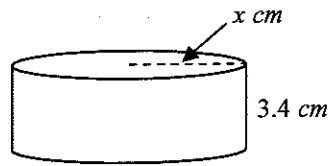


Find each missing measure. Use 3.14 for π , if necessary.

1. Volume $\approx 427.04 \text{ ft}^3$
Height \approx _____



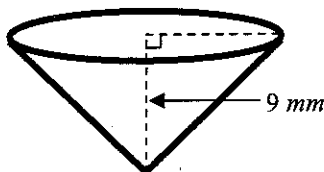
2. $V \approx 266.9 \text{ cm}^3$
Radius \approx _____



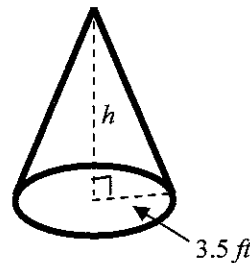
3. The circumference of a round swimming pool at a resort is 314 feet. Use 3.14 for π .
- How much ground area will the swimming pool require?
 - City building codes require the owner to allow an extra 5 feet all the way around the pool. How much area will be required for the pool and the required extra space all together?
 - The pool is 5 feet tall, how much water can it hold?
 - The instructions say that the pool should only be filled to $\frac{2}{3}$ of its capacity. How much water should be put in the pool?

Find each missing measure. Use 3.14 for π .

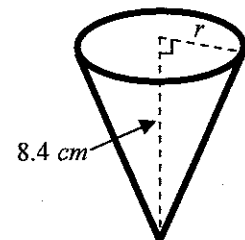
4. Volume $\approx 345 \text{ mm}^3$
Area of the base \approx _____



5. Volume $\approx 179.5 \text{ ft}^3$
Height of the cone \approx _____



6. $V \approx 54.95 \text{ cm}^3$
Radius \approx _____



7. A cone has a volume of 6π cubic meters. The height of the cone is 2 meters. What is length of the radius?
8. A snow cone cup is 12 *cm* tall and has a diameter of 10 *cm*. Snow cones cost \$2.00. Serena only has \$1.00. The vendor agrees to give Serena half of the volume of a regular snow cone. What is the volume of Serena's snow cone? Use 3.14 for π .
9. A bucket brigade is used when a fire truck cannot get to a fire. A bucket brigade is a human chain where a bucket is passed from one person to another to extinguish a fire. In one brigade the buckets were shaped like cones with a handle. Each bucket had a diameter of 1 foot and was 1.25 feet tall. A rectangular prism that was 8 feet long, 3 feet wide and 2.5 feet tall was filled with water. How many buckets of water did it hold? Use 3.14 for π .
10. Mount Saint Helens erupted in 1980. Assume the mountain was shaped like a cone. The radius of the base of the mountain is 19,685 feet. Before the eruption the mountain was 9,677 feet tall. After the eruption the mountain is 8,363 feet tall. The radius of the crater is 7,392 feet.
- Find the volume of Mount St. Helens before the eruption. Use 3.14 for π .
 - Find the volume of the cone shaped top that erupted. Use 3.14 for π .
11. A cylindrical can holds three balls. The balls touch the top, bottom and sides of the can. The radius of one ball is 6 *cm*. Find the volume of the remaining space inside the cylinder. Use 3.14 for π .



12. A softball is shipped in a cubical box where it touches all sides of the box. The softball is 12 inches around the middle of the ball. Round to the nearest hundredth, if needed.

- a. Find the radius of the sphere. Use 3.14 for π .
- b. Calculate the volume of the softball. Use 3.14 for π .
- c. What is the volume of the cubical box?
- d. How much space remains in the box when the softball is in it?