

Volumes of Cylinders and Rectangular Solids

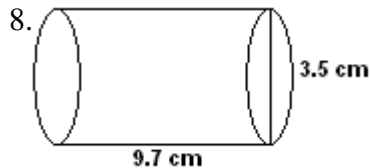
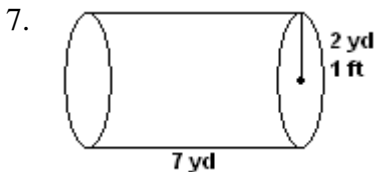
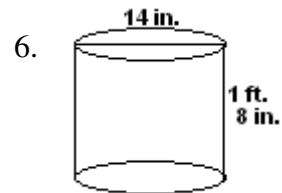
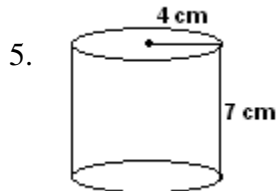
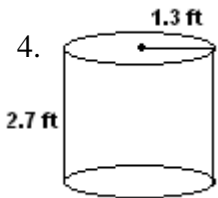
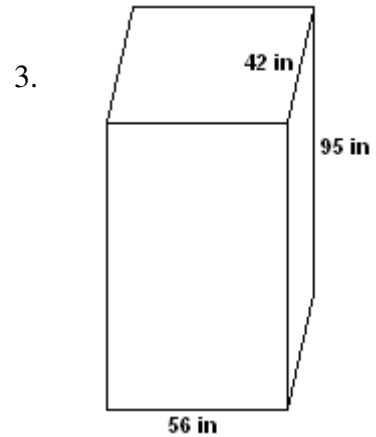
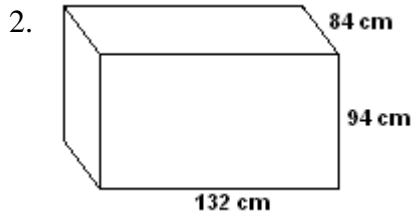
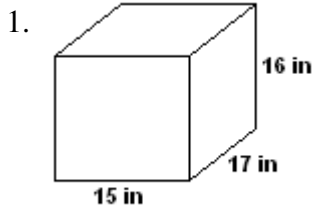
Remember that the formula for both a rectangular solid (a box) and a cylinder is the same:

$$\text{Volume} = \text{Area of the base} \cdot \text{the height}$$

The only difference is that a box has a rectangular base and a cylinder has a circular base. So:

$$V \text{ of box} = (\text{Length} \cdot \text{Width}) \cdot \text{Height} \quad \text{and} \quad V \text{ of cylinder} = (\pi \cdot \text{Radius}^2) \cdot \text{Height}$$

Find the volumes of the figures below. You may have to change measurements to common units first. For example, 3 ft 5 inches = 36 in + 5 in = 41 inches.



Find the volume of a box with
9. L = 5 cm, W = L, H = 7 cm

Find the volume of a cylinder with
10. Diameter = 12 ft,
height = 3 times the radius