# UNIT CONVERSIONS
## Practice Worksheet

1. What volume in liters will 300.0 g of mercury occupy? Density of mercury is 13.6 g/cm$^3$.

2. The density of zinc is 455 lb/ft$^3$. Find the mass (in g) of 9.00 cm$^3$ of zinc.
   (1 in= 2.54 cm and 1 lb = 453.6 g)

3. An object weighing 1.840 kg has a volume of 0.0015 m$^3$. What is the density of the object in g/cm$^3$.

4. What is the density (g/mL) of an object that has a mass of 14.01 grams and, when placed into a graduated cylinder, causes the water level to rise from 25.2 mL to 33.6 mL?

5.  A sample of ethanol has a density of 0.785 g/mL, and a mass of 2.00 g.   Calculate the volume of this sample in cubic inches (in$^3$).

6.  An irregular shape object has a mass of 35.20 g and a density of 1.32 g/cm$^3$.  This object was placed into a graduated cylinder containing 23.0 mL of water.  What is the final volume of the water in the graduated cylinder?

7.  For a material to float on the surface of water, the material must have a density less than that of water (1.00 g/mL), and must not react with water or dissolve in it.  A cylindrical ball has a radius of 0.20 cm, and 3.55 cm in height, and a mass of 0.482 g.  Will this object float or sink when placed in water? (Volume = $\pi r^2 h$)

8.  A physician has ordered 20.0 mg of ampicillin for the treatment of ear infection for every hour.  If this medicine is available as 250-mg tablets, how many tablets will the patient need for one week?