

Please watch the video and follow along with this worksheet.

1. The distance between the oxygen atom and a hydrogen atom in a water molecule is 95.7 pm. What is this distance in meters? In nanometers?
2. You have a beaker with a volume of 0.6 L (liters). What is the volume in cm^3 (cubic centimeters) and also in mL (milliliters)?
3. A US penny has a mass of 2.65 g (grams). What is this in kg (kilograms) and mg (milligrams)?
4. You have 250 cm^3 of ethyl alcohol. If the density of ethyl alcohol is 0.789 g/cm^3 (at 20°C), then how many grams of alcohol do you have?

ANSWER KEY:

1. $9.57 \times 10^{-11} \text{ m}$; $9.57 \times 10^{-2} \text{ nm} = 0.0957 \text{ nm}$
2. 600 cm^3 ; 600 mL
3. 0.00265 kg ; $2.65 \times 10^3 \text{ mg}$
4. 197 g