

Chemistry 101  
In-Class Assignment 1  
Unit Conversion Worksheet

Try the following conversions.

Convert:

1. 1.6 m into mm

$$\frac{1.6 \text{ m}}{1} \times \frac{1000 \text{ mm}}{1 \text{ m}} = 1600 \text{ mm}$$

2. 36 g into kg

$$\frac{36 \text{ g}}{1} \times \frac{1 \text{ kg}}{1000 \text{ g}} = 0.036 \text{ kg}$$

3. 470. mi into km

$$\frac{470. \text{ mi}}{1} \times \frac{5280 \text{ ft}}{1 \text{ mi}} \times \frac{12 \text{ in}}{1 \text{ ft}} \times \frac{2.54 \text{ cm}}{1 \text{ in}} \times \frac{1 \text{ m}}{100 \text{ cm}} \times \frac{1 \text{ km}}{1000 \text{ m}} = 756 \text{ km}$$

4. 1.43 kg/L into g/mL

$$\frac{1.43 \text{ kg}}{1 \text{ L}} \times \frac{1 \text{ L}}{1000 \text{ mL}} \times \frac{1000 \text{ g}}{1 \text{ kg}} = 1.43 \text{ g/mL}$$

5. 86 inches into m

$$\frac{86 \text{ in}}{1} \times \frac{2.54 \text{ cm}}{1 \text{ in}} \times \frac{1 \text{ m}}{100 \text{ cm}} = 2.2 \text{ m}$$

6.  $9.3 \times 10^{-5}$  g into  $\mu\text{g}$

$$\frac{9.3 \times 10^{-5} \text{ g}}{1} \times \frac{10^6 \mu\text{g}}{1 \text{ g}} = 93 \mu\text{g}$$

7. 30 feet per second into miles per hour

$$\frac{30 \text{ ft}}{1 \text{ s}} \times \frac{1 \text{ miles}}{5280 \text{ ft}} \times \frac{60 \text{ s}}{1 \text{ min}} \times \frac{60 \text{ min}}{1 \text{ hr}} = 20 \text{ miles/hr}$$

8. 18 mm into m

$$\frac{18 \text{ mm}}{1} \times \frac{1 \text{ m}}{1000 \text{ mm}} = 0.018 \text{ m}$$

9. 400. nm into m

$$\frac{400. \text{ nm}}{1} \times \frac{1 \text{ m}}{10^9 \text{ nm}} = 4.00 \times 10^{-7} \text{ m}$$

10.  $1.54 \times 10^{-10}$  m into mm

$$\frac{1.54 \times 10^{-10} \text{ m}}{1} \times \frac{1000 \text{ mm}}{1 \text{ m}} = 1.54 \times 10^{-7} \text{ mm}$$