Dimensional Analysis Review

Perform the following conversions using the dimensional analysis technique. Fill in any portion that is missing

1) Convert 32 g to kg

$$\frac{32 \text{ g}}{} \quad \frac{1 \text{ kg}}{1000 \text{ g}} = \boxed{0.032 \text{ kg}}$$

2) Convert 12.5 mol to molecules

$$\frac{12.5 \text{ mol}}{} \quad \frac{6.02 \text{ x } 10^{23} \text{ molecules}}{1 \text{ mol}} =$$

3) Convert 22.4 L to mL

$$\frac{22.4 \text{ L}}{} \quad \frac{1000 \text{ mL}}{1 \text{ L}} =$$

4) Convert 5 m to cm

$$\frac{5 \text{ m}}{} \quad \frac{\text{cm}}{\text{m}} =$$

5) Convert 17 in to ft

$$\frac{17 \text{ in}}{} \quad \frac{}{\text{in}} =$$

6) Convert 1.3 g of H_2O to molecules

$$\frac{1.3 \text{ g}}{18 \text{ g}} \quad \frac{}{} =$$

7) Convert 10.3 min to hr

$$\frac{10.3 \text{ min}}{} \quad =$$

8) Convert 7.4 x 10^{24} molecules to mol

$$\frac{\text{molecules}}{} \left| \frac{\text{mol}}{6.02 \times 10^{23} \text{ molecules}} \right. =$$

9) Convert 4315 mg of CO_2 to moles

$$\frac{}{} \left| \frac{\text{g}}{\text{mg}} \right| \frac{}{} =$$

10) Convert 0.82 mL to grams if density is 1.35 g/mL

11) Convert 0.5 m to cm

12) Convert 24 mi/hr to ft/min

$$\frac{24 \text{ mi}}{1 \text{ hr}} \left| \frac{\text{ft}}{\text{mi}} \right| \frac{1 \text{ hr}}{\text{min}} =$$

13) Convert 16 mg/day to g/min

14) Convert 2210 mol of $Fe(OH)_2$ to g

15) Convert 2.68 x 10^{15} molecules of H_2O to atoms