Worksheet – Mole Conversions

Name:

Show all work, including conversion factors and units. Watch sig digs.

- I. Practice Problems
- A. What is the mass of 1 mole (molar mass) of:

1. H₂ 2. Mg(OH)₂

3. CO₂ 4. NH₄Cl

 $5. \text{ CuSO}_4$ $6. \text{ AgNO}_3$

- B. Convert from grams to moles, or moles to grams
 - 1. How many moles is 12.5 g of magnesium hydroxide?
 - 2. How many moles is 1.46 g of hydrogen gas (H₂)?
 - 3. How many grams are in 4.3 moles of ammonium chloride?
- C. Convert from moles to molecules, or molecules to moles
 - 1. How many molecules are in 2.0 moles of hydrogen gas (H₂)?
 - 2. How many moles is 2.0×10^{25} molecules of silver nitrate?
- D. How many atoms of oxygen are in 2.4 x 10²³ molecules of copper(II) sulfate?

II. Application Problems

- A. How many molecules are in 96 g of carbon dioxide?
- B. How many oxygen atoms are in 96 g of CO₂?
- C. How many grams would 1.0 x 10²⁵ molecules of copper(II) sulfate weigh?
- D. How much does each individual molecule of copper(II) sulfate weigh?