Name:

WP Practice
Exam 5: Chemistry Quantitation, Empirical and Molecular Formulas
(Also review pretest packet for Unit 7: The Mole)

1. How many molecules are present in 6.88 moles of N_2O_3?

2. How many molecules of F_2 are present in 59.0 g of F_2?

3. How many atoms of oxygen are in one molecule of H_2CO_3?

4. How many moles of hydrogen are in 0.50 mole of $(NH_4)_2O$

5. Calculate the mass, in grams, of 6.2×10^{23} aluminum atoms.

6. Determine the total number of atoms in 30.0 grams of C_2H_4 (Hint: consider the definition of an atom vs. a molecule).

7. Calculate the molar mass of $MgCO_3$.

8. Calculate the molar mass of copper(II) nitrate.

9. Calculate the density, in g/L, of krypton gas at STP (1 mole of gas at STP occupies 22.4 L).

10. A compound is comprised of 50.05% sulfur and 49.94% oxygen and has a molar mass of 64.07 g/mol.
    a. Determine the compounds empirical formula.

    b. Determine the compound's molecular formula.