Name _____

Chapter 6 Practice 2

1. How many moles are in 38.12 grams of CO_2?

2. What is the mass in of 5.00 moles of Fe_2O_3?

3. Find the mass, in grams, of 1.0×10^{23} molecules of N_2.

4. How many molecules of SiF_4 are in 15.0 g of silicon tetrafluoride?

5. Rubbing alcohol was found to contain 60.0 % carbon, 13.4 % hydrogen, and 26.6 % oxygen. What is the empirical formula of rubbing alcohol?

6. Calculate the empirical formula of the following compounds given their percent composition.

a. a compound that is 68.4 % Cr and 31.6 % O

b. a compound that is 63.5 % Ag, 8.2 % N, and 28.3 % O

7. Given the following the empirical formulas and molar masses, what is the molecular formula of the following compounds.

a. CH_2O, molar mass is 90 g/mol

b. CFBrO, molar mass is 509.6 g/mol

c. C_2OH_4, molar mass is 88.1 g/mol

8. Find the percent composition (by mass) of nickel (II) hydroxide.

% Ni = _____

% O = _____

% H = _____

9. Find the percent composition (by mass) of nitric acid.

% N = _____

% O = _____

% H = _____