PERCENT COMPOSITION AND EMPIRICAL FORMULAS

NAME _____ SECTION _____

1. For the compound $Na_2S_2O_3$:

   a. Determine its molar mass (how many grams of $Na_2S_2O_3$ in 1 mol of $Na_2S_2O_3$).

   b. Calculate the percent (by mass) of the element sodium in $Na_2S_2O_3$.

   c. Calculate the percent (by mass) of the element sulfur in $Na_2S_2O_3$.

   d. Calculate the percent (by mass) of the element oxygen in $Na_2S_2O_3$.

2. A compound is analyzed and found to contain 1.89 g Na, 2.632 g S, and 1.975 g O. Calculate the percent composition of sodium, sulfur, and oxygen in the compound.

3. A compound is analyzed and found to be 29.11% sodium, 40.50% sulfur, and 30.38% oxygen. Determine the empirical formula of this compound.

4. A sample of an unknown compound containing sodium, sulfur, and oxygen has a mass of 1.006 g. Analysis shows this sample to contain 0.2928 g of sodium and 0.4074 g of sulfur. Assuming the remaining mass is oxygen, determine the empirical formula of this compound.