

Sticks & Stones HW

Read and outline (Cornel style) **Section 12.1** in your chemistry textbooks. ****Your section outline must be at least ½ page and have 3-4 questions.**** Then answer the following assessment questions:

1. What is stoichiometry?
2. What is a mole ratio?
3. Balance the following equations and determine the possible mole ratios:
 - a. $\text{ZnO(s)} + \text{HCl(aq)} \rightarrow \text{ZnCl}_2\text{(aq)} + \text{H}_2\text{O}$
 - b. Butane (C_4H_{10}) + oxygen \rightarrow carbon dioxide + water
4. Suppose you react iron (III) nitrate, $\text{Fe(NO}_3)_3\text{(aq)}$, with sodium sulfide, $\text{Na}_2\text{S(aq)}$:
 - a. Predict the products.
 - b. Write the **balanced** chemical equation.
 - c. What ratio of reactants would yield the maximum amount of product?
5. Suppose you react calcium chloride, $\text{CaCl}_2\text{(aq)}$, with sodium hydroxide, NaOH(aq) :
 - a. Predict the products.
 - b. Write the **balanced** chemical equation.
 - c. What ratio of reactants would yield the maximum amount of product?