

College Prep Chemistry of the Earth System

Assignment 5A 30 Points

Introduction to Chemical Reactions

For the following, answer each question

1. What *in general* occurs during a chemical reaction?
2. What is the general format for a chemical reaction?
3. For each of the following identify each reaction as combination, decomposition, replacement, or combustion
 - a. A reaction starts burning and produces a lot of energy
 - b. A metal and a liquid react, producing a new metal
 - c. Two single elements react to produce a new compound
 - d. A compound or molecule dissolves in water
4. Define and explain the differences between an exo and endothermic reaction.
5. For the following identify the reactants (*including coefficient*), and products
 - a. $2\text{Al} + 3\text{Cl}_2 \rightarrow 2\text{AlCl}_3$
 - b. $\text{CuSO}_4 \rightarrow \text{Cu}^{2+} + \text{SO}_4^{2-}$
 - c. $2\text{NaOH} + \text{CrO} \rightarrow \text{Na}_2\text{O} + \text{Cr}(\text{OH})_2$
 - d. $2\text{C}_2\text{H}_6 + 7\text{O}_2 \rightarrow 4\text{CO}_2 + 6\text{H}_2\text{O}$