## **Limiting Reagent Worksheet #1**

Name:

1. Given the following reaction: (Balance the equation first!)

$$C_3H_8 + O_2 -----> CO_2 + H_2O$$

- a) If you start with 14.8 g of C<sub>3</sub>H<sub>8</sub> and 3.44 g of O<sub>2</sub>, determine the limiting reagent
- b) determine the number of moles of carbon dioxide produced
- c) determine the number of grams of H2O produced
- d) determine the number of grams of excess reagent left
- 2. Given the following equation:

$$Al_2(SO_3)_3 + 6 NaOH ----> 3 Na_2SO_3 + 2 Al(OH)_3$$

- a) If 10.0 g of Al<sub>2</sub>(SO<sub>3</sub>)<sub>3</sub> is reacted with 10.0 g of NaOH, determine the limiting reagent
- b) Determine the number of moles of Al(OH)<sub>3</sub> produced
- c) Determine the number of grams of Na<sub>2</sub>SO<sub>3</sub> produced
- d) Determine the number of grams of excess reagent left over in the reaction
- 3. Given the following equation:

$$Al_2O_3 + Fe ----> Fe_3O_4 + Al$$

- a) If 25.4 g of Al<sub>2</sub>O<sub>3</sub> is reacted with 10.2 g of Fe, determine the limiting reagent
- b) Determine the number of moles of Al produced
- c) Determine the number of grams of Fe<sub>3</sub>O<sub>4</sub> produced
- d) Determine the number of grams of excess reagent left over in the reaction