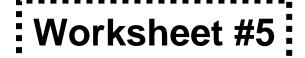
## Dougherty Valley HS Chemistry Stoichiometry –Limiting Reagent Stoich Practice



Name: Period: Seat#:

Show work and include ALL units. Use a single dimensional analysis line method for conversions!

- 1) 14.8g of  $C_3H_8$  and 3.44 g of  $O_2$  react in the following reaction:  $C_3H_8 + 5O_2 \rightarrow 3CO_2 + 4H_2O$ 
  - a. Determine the limiting reagent and the excess reagent
  - b. Determine the number of grams of H<sub>2</sub>O produced

c. Determine the number of grams of the excess reagent leftover

- 2) 10.0 g of  $Al_2(SO_3)_3$  is reacted with 10.0 g of NaOH in the following reaction:  $Al_2(SO_3)_3 + 6NaOH \rightarrow 3Na_2SO_3 + 2Al(OH)_3$ 
  - a. Determine the limiting reagent and the excess reagent
  - b. Determine the number of grams of Na<sub>2</sub>SO<sub>3</sub> produced

c. Determine the number of grams of the excess reagent leftover

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- 3) 25.4 g of  $Al_2O_3$  is reacted with 10.2 g of Fe: 4  $Al_2O_3$ + 9 Fe  $\rightarrow$  3 Fe<sub>3</sub>O<sub>4</sub> + 8 Al
  - a. Determine the limiting reagent and the excess reagent
  - b. Determine the number of moles of Fe<sub>3</sub>O<sub>4</sub> produced

c. Determine the number of grams of the excess reagent leftover

- 4) When copper (II) chloride reacts with sodium nitrate, copper (II) nitrate and sodium chloride are formed.
  - a. Write the balanced equation for the reaction given above.
  - b. If 15 g of copper (II) chloride react with 20 g of sodium nitrate what is the limiting reagent for the reaction?
  - c. How much sodium chloride can be formed in grams?
  - d. How many grams of copper (II) nitrate is formed?
  - e. How many grams of the excess reagent are left over in this reaction?
  - f. If 11.3 g of sodium chloride was actually formed in the reaction, what is the percent yield of this reaction?

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- 5) 1000 grams of sodium chloride is combined with 2000 grams of barium phosphate

  - a. How many grams of each product are made?b. How many grams of the excess reagent are left over in this reaction?