AP CHEMISTRY

TOPIC 2: STOICHIOMETRY, PART B, EXAMPLES

Day 14:

Stoichiometry

- Limiting Reactants

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1) Determine the limiting react when 55.0 grams of methane, CH_4, reacts with 22.0 grams of oxygen gas in a combustion reaction. Hint: we are NOT trying to calculate "how much" product was formed. This technique, which is about to be demonstrated, ***MUST be mastered*** for the AP exam.

2) Calcium metal and nitrogen gas will react to produce calcium nitride. Calculate the mass of calcium nitride that can be produced from the reaction of 75.0 grams of Ca with 25.0 grams of nitrogen gas?

   a) First determine the limiting reactant (as in example #1)

   b) Next, calculate the mass of the product produced in the reaction (from your limiting reactant amount).

   c) Finally, calculate the mass of the Un-reacted reactant.