Name: _____ Date: _____ Period: ____

Stoichiometry- Limiting Reactants (Don't forget to balance!)

1. $Zn + S_8 \rightarrow ZnS$

   (a) Given 8.00g of Zn and 6.00g S_8, which is the limiting reagent?
   (b) How much excess reactant is left (in grams)?
   (c) How much ZnS is made (in grams)?

2. $CS_2 + O_2 \rightarrow CO_2 + SO_2$

   (a) Given 15g of CS_2 and 15g of O_2, which is the limiting reagent?
   (b) How much excess reactant is left (in grams)?
   (c) How much of each product is made (in grams)?

3. $Fe + H_2O \rightarrow Fe_3O_4 + H_2$

   (a) Given 5.0g of Fe and 6.0g H_2O, which is the limiting reagent?
   (b) How much excess reactant is left (in grams)?
   (c) How much of each product is made (in grams)?

4. $Fe + O_2 \rightarrow Fe_2O_3$

   (a) Given 10.0g of Fe and 12.0g of oxygen, which is the limiting reagent?
   (b) How much excess reactant is left (in grams)?
   (c) How much Fe_2O_3 is made (in grams)?

5. $CaSi_2 + SbCl_3 \rightarrow Si + Sb + CaCl_2$

   (a) Given 5.5g of $CaSi_2$ and 10.7g of $SbCl_3$, which is the limiting reagent?
   (b) How much excess reactant is left (in grams)?
   (c) How much of each product is made (in grams)?

6. $Mg + O_2 \rightarrow MgO$

   (a) Given 10.0g of Mg and 12.0g of O_2, which is the limiting reagent?
   (b) How much excess reactant is left (in grams)?
   (c) How much MgO is made (in grams)?

7. $Li + H_2O \rightarrow LiOH + H_2$

   (a) Given 5.00g of Li and 6.7g of H_2O, which is the limiting reagent?
   (b) How much excess reactant is left (in grams)?
   (c) How much of each product is made (in grams)?

8. $CH_4 + O_2 \rightarrow H_2O + CO_2$

   (a) Given 6.00g of CH_4 and 4.00g of O_2, which is the limiting reagent?
   (b) How much excess reactant is left (in grams)?
   (c) How much of each product is made (in grams)?