

Name _____

Limiting Reactant & Percent Yield

1) For the reaction $\text{C}_3\text{H}_8 + \text{O}_2 \rightarrow \text{CO}_2 + \text{H}_2\text{O}$

a. How many moles of CO_2 will be produced from 2.53 mole of C_3H_8 and 10.3 mol of O_2 ?

b. Which reactant is the limiting reactant? _____ Which is the excess reactant? _____

c. If 4.35 moles of CO_2 are actually produced, what is the percent yield?

2) For the reaction: $\text{N}_2 + \text{H}_2 \rightarrow \text{NH}_3$

a. How many moles of NH_3 will be produced from 10.25 L of H_2 and 2.50 L of N_2 ?

b. Which reactant is the limiting reactant? _____ Which is the excess reactant? _____

c. If 0.297 moles of NH_3 are actually produced, what is the percent yield?

3) For the reaction $\underline{\hspace{1cm}} \text{Fe}_3\text{O}_4 + \underline{\hspace{1cm}} \text{H}_2 \rightarrow \underline{\hspace{1cm}} \text{Fe} + \underline{\hspace{1cm}} \text{H}_2\text{O}$

a. How many grams of Fe will be produced from 25.0 grams of Fe_3O_4 and 10.0 grams of H_2 ?

b. Which reactant is the limiting reactant? $\underline{\hspace{2cm}}$ Which is the excess reactant? $\underline{\hspace{2cm}}$

c. If 17.74 grams of Fe are actually produced, what is the percent yield?