Name _____

<u>WKS 10.1 – Using the Mole Ratio (1 page)</u>

1. Define "stoichiometry".

2. Define "molar mass".

3. Define "mole ratio".

4. Define "theoretical yield".

5. Answer the following questions for this equation: $2 H_2 + O_2 \rightarrow 2 H_2O$
    a. What is the molar ratio of hydrogen gas to oxygen gas?

    b. What is the molar ratio of hydrogen gas to water?

    c. What is the molar ratio of oxygen gas to water?

    d. If you had 20 moles of H_2 on hand, and excess O_2, how many moles of H_2O could you theoretically make?

    e. If you had 20 moles of O_2 on hand, and excess H_2, how many moles of H_2O could you theoretically make?

6. Answer the following questions for this equation: $N_2 + 3 H_2 \rightarrow 2 NH_3$
    a. What is the molar ratio of nitrogen gas to ammonia?

    b. What is the molar ratio of hydrogen gas to ammonia?

    c. What is the molar ratio of nigrogen gas to hydrogen gas?

    d. What is the maximum amount of ammonia that could be made from 3.00 moles of hydrogen gas?

    e. How many moles of nitrogen gas would it take to make a maximum of 15 moles of ammonia?

    f. How many moles of hydrogen gas would it take to make a maximum of 15 moles of ammonia?

90% of a worksheet must be completed to earn credit for that worksheet!