**Chapter 12: Stoichiometry practice wksht #2 Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. **Given the equation: Fe2O3 + 2 Al 🡪 2 Fe + Al2O3**
   1. **How many grams of aluminum would be needed to produce 15.0 g of iron?**
   2. **How many grams of iron (III) oxide would be needed to produce 15.0 g of iron?**
   3. **How many grams of aluminum oxide would be formed if 15.0 g of iron were formed?**
2. **Given the equation: N2 + 3 H2 🡪 2 NH3**
   1. **What mass of ammonia would be produced if 13.4 g of nitrogen gas reacted?**
   2. **What mass of ammonia would be produced if 13.4 g of hydrogen gas reacted?**
   3. **What volume of ammonia would be produced if 13.4 g of nitrogen gas reacted (STP)?**
   4. **What volume of ammonia would be produced if 13.4 g of hydrogen gas reacted (STP)?**
   5. **What volume of ammonia would be produced if 13.4 L of nitrogen gas reacted (STP)?**
   6. **What volume of ammonia would be produced if 13.4 L of hydrogen gas reacted (STP)?**
   7. **How many molecules of ammonia would be produced if 13.4 g of nitrogen gas reacted (STP)?**
   8. **How many molecules of ammonia would be produced if 13.4 g of hydrogen gas reacted (STP)?**
3. **Given the following equation: 4 Hg + 02 🡪 2 Hg2O**
   1. **What mass of mercury is needed to produce 23.7 g of mercury (I) oxide?**
   2. **What volume of oxygen gas (STP) is needed to produce 23.7 g of mercury (I) oxide?**
   3. **How many grams of oxygen will be needed to react with 67.3 g of mercury?**
4. **How many grams of water will be produced when 1.18 g of hydrogen gas react with excess oxygen gas?**
5. **How many grams of water will be produced when 1.18 g of oxygen gas react with excess hydrogen gas?**
6. **How many grams of silver iodide can be produced from 52.38 g of iodine and excess silver?**
7. **If 26.2 g of sulfur trioxide decompose, how many liters of oxygen gas be produced at STP?**