Limiting reactant Worksheet

1. Identify the limiting and excess reactant when 25 liters of nitrogen gas reacts with 25 liters of hydrogen gas at STP.

\_\_\_\_\_N2 + \_\_\_\_\_H2 → \_\_\_\_\_NH3

1. Identify the limiting and excess reactant in a reaction involving 100 g each of potassium chloride and silver nitrate.

CaCl2 + 2AgNO3 → 2AgCl + Ca(NO3)2

1. Silicon dioxide reacts with hydrogen fluoride t produce silicon fluoride and water.

SiO2 + 4HF → SiF4 + 2H2O

If 2.0 mols of HF are exposed to 4.5 mol SiO2, what is the limiting reactant? How much SiF4 would be produced?

1. In the following reaction, 50.0 grams of H2SO4 reacts with 75.0 grams of NaOH.

\_\_\_\_\_ H2SO4 + \_\_\_\_\_NaOH → \_\_\_\_\_\_Na2SO4 + \_\_\_\_\_H2O

* 1. Identify the limiting reactant.
  2. How many grams of Na2SO4 will be produced?

1. According to the following reaction, if 90.0 g of sodium as added to 80.0 g of water, how many liters of hydrogen would be produced at STP? (remember to find the limiting reactant first)

2Na + 2H2O → 2NaOH + H2

1. Using the synthesis reaction: P4  + 5O2  → P4O10

How many grams of tetraphosphorous decoxide would be formed if 2.50 g of phosphorous was burned in a flask containing 0.750 L of oxygen at STP?