**Limiting Reagent Worksheet Answers**

*For the following reactions, find the following:*

*a) Which of the reagents is the limiting reagent?*

*b) What is the maximum amount of each product that can be formed?*

*c) How much of the other reagent is left over after the reaction is complete?*

1) Consider the following reaction:

3 NH4NO3 + Na3PO4 🡪 (NH4)3PO4 + 3 NaNO3

Answer the questions above, assuming we started with 30 grams of ammonium nitrate and 50 grams of sodium phosphate.

* **ammonium nitrate**
* **18.6 grams of ammonium phosphate, 31.9 grams of sodium nitrate**
* **29.5 grams of sodium phosphate**

2) Consider the following reaction:

3 CaCO3 + 2 FePO4 🡪 Ca3(PO4)2 + Fe2(CO3)3

Answer the questions at the top of this sheet, assuming we start with 100 grams of calcium carbonate and 45 grams of iron (II) phosphate.

* **iron (III) phosphate**
* **46.3 grams of calcium phosphate, 43.8 grams of iron (III) carbonate**
* **54.0 grams of calcium carbonate**