

## Limiting Reagent Worksheet

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:



Answer the questions above, assuming we started with 30.0 grams of ammonium nitrate and 50.0 grams of sodium phosphate.

- 2) Consider the following reaction:



Answer the questions at the top of this sheet, assuming we start with 100.0 grams of calcium carbonate and 45.0 grams of iron (III) phosphate.

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## Percent Yield Calculations

- 1) Balance this equation and state which of the six types of reaction is taking place:



Type of reaction: \_\_\_\_\_

- 2) If I start this reaction with 40. grams of magnesium and an excess of nitric acid, how many grams of hydrogen gas will I produce?

- 3) If 1.70 grams of hydrogen is actually produced, what was my percent yield of hydrogen?

- 4) Balance this equation and state what type of reaction is taking place:



Type of reaction: \_\_\_\_\_

- 5) If 25.0 grams of carbon dioxide gas is produced in this reaction, how many grams of sodium hydroxide should be produced?

- 6) If 50.0 grams of sodium hydroxide are actually produced, what was my percent yield?
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