

Name: _____ per _____

Limiting Reactant

Practice Sheet #

1. Copper (II) sulfate is reacted with zinc to produce copper and zinc sulfate.
 - a. Write a balanced chemical equation for this reaction.
 - b. If 2.00 moles of copper (II) sulfate are combined with 3.00 mol of zinc, which reactant is limiting and which is excess?
 - c. What is the mass of each of the products?
2. Calcium hydroxide reacts with phosphoric acid to produce water and calcium phosphate.
 - a. Write a balanced chemical equation for this reaction.
 - b. If 4.20 mol of calcium hydroxide are reacted with 2.20 mol of phosphoric acid, which reactant is limiting and which is excess.
 - c. What is the mass of each of the products?
3. Lithium is reacted with iodine.
 - a. Write a balanced chemical equation for this reaction.
 - b. If 15.10 grams of lithium are combined with 200.4 g of iodine, which reactant and which is excess?
 - c. What is the mass of the product?

Name: _____ per _____

- d. What mass of the excess reactant is used in the reaction, and what mass of the excess reactant remains after the reaction?
-
4. Barium carbonate is reacted with ammonium fluoride.
 - a. Write a balanced chemical equation for this reaction.

 - b. If 240 g of barium chloride and 95.0 g ammonium fluoride are combined, which reactant is limiting and which is excess?

 - c. What is the mass of each of the products?

 - d. If the reaction yields 100 g of ammonium carbonate, determine the percent yield. What mass of barium fluoride would actually be obtained?

 - e. What mass of the excess reactant is used in the reaction, and what mass of the excess reactant remains after the reaction?
-
5. Aluminum bromide is reacted with chlorine.
 - a. Write a balanced chemical equation for this reaction.

 - b. If 135 g of aluminum bromide and 50.0 g of chloride are combined, which reactant is limiting and which is excess?

 - c. What is the mass of each of the products?

 - d. If the reaction yields 104 g of bromine, determine the percent yield. What mass of aluminum chloride would actually be obtained?

 - e. What mass of the excess reactant is used in the reaction, and what mass of the excess reactant remains after the reaction?