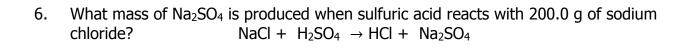Name:

Chemistry – Stoichiometry Worksheet

Instructions: 1. Write balanced equation
2. Circle the quantity you start with; underline the quantity you want to end with
3. Set up dimensional analysis and solve.

1. How many grams of calcium carbonate are required to prepare 50.0 g of calcium oxide? $CaCO_3 \rightarrow CaO + CO_2$

2. When 0.50 g of magnesium reacts with silver nitrate, how many grams of silver are prepared? (HINT: single replacement)

3. If 75.0 g of copper react with mercury (II) nitrate, how many grams of mercury form? $Cu + Hg(NO_3)_2 \rightarrow Cu(NO_3)_2 + Hg$

4. When 60.0 g of aluminum react with hydrochloric acid, how many grams of hydrochloric acid react?

5. How many grams of magnesium chloride are produced by treating 4.00 g of titanium (III) chloride with magnesium?

6. What mass of Na_2SO_4 is produced when sulfuric acid reacts with 200.0 g of sodium chloride?

$$NaCl + H_2SO_4 \rightarrow HCl + Na_2SO_4$$

7. How many moles of HCl are needed to form $3.5 * 10^3$ moles of Cl_2?

$$HCl + O_2 \rightarrow H_2O + Cl_2$$

8. How many grams of sodium hydroxide will react with $1.50 * 10^3$ g of phosphoric acid?

9. If 90.0 g of barium chloride react with sulfuric acid, how many grams of HCl are produced?

10. If 320 grams of sodium carbonate react with calcium hydroxide, how many grams of sodium hydroxide are formed?