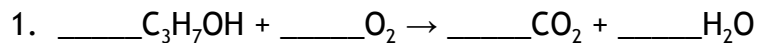


Name: _____ Date: _____ Class Pd. _____

HONORS CHEMISTRY: Unit 5 Moles & Stoichiometry Test Review



- a. What is the mole ratio of oxygen to carbon dioxide?

- b. How many moles of carbon dioxide are produced when 4.6 mol of oxygen react?

- c. How many molecules of $\text{C}_3\text{H}_7\text{OH}$ will react with 4.6 L of oxygen?

2. Lithium nitride reacts with water to form ammonia (NH_3) and lithium hydroxide.

- a. How many grams of lithium nitride will react with 40.0 g of water?

- b. What mass of lithium hydroxide is produced from 6.75 mol of lithium nitride?

Name: _____ Date: _____ Class Pd. _____

3. A student made 75.94 g of magnesium chloride by reacting 30.00g of Magnesium with 60.00g of hydrochloric acid.

a. Write the balanced equation.

b. What is the limiting reactant?

Excess reactant?

c. What is the percent yield?

d. Determine the amount of excess reactant remaining.

Name: _____ Date: _____ Class Pd. _____

4. A student reacts 2.00g of Lead (II) nitrate with 4.00g of potassium iodide. How much product in grams should she expect to collect? (Write a balanced reaction and determine the precipitate)

5. Find the percentage of nitrogen in ammonium nitrate, an important source of nitrogen in fertilizers.

Name the following compounds and give the percent composition of each element.

6. Fe_2O_3 Name: _____ %Fe = _____
%O = _____

7. Ag_2O Name: _____ %Ag = _____
% O = _____

8. Na_2SO_4 Name: _____ %Na = _____
%S = _____
%O = _____

Name: _____ Date: _____ Class Pd. _____

9. What is the empirical formula of a compound that contains 53.73 % Fe and 46.27 % S?

10. What is the empirical formula of a compound that contains 63.1 % Mn and 36.9 % S?

11. What is the empirical formula of a compound that contains 26.6 % K, 35.4 % Cr, and 38.0 % O?

12. An organic compound is found to contain 92.25 % carbon and 7.75 % hydrogen. If the molecular mass is 78, calculate:

The empirical formula = _____

The empirical formula mass = _____

The molecular formula = _____

Name: _____ Date: _____ Class Pd. _____

13. In an experiment, a student gently heated a hydrated $\text{CuSO}_4 \cdot x \text{H}_2\text{O}$ to remove the water. The following data was recorded:

Mass of empty crucible	19.82 g
Mass of crucible & contents before heating	21.54 g
Mass of crucible & contents after heating	20.94 g

a. Determine the formula of the hydrate.

b. The formula of the hydrate = _____

c. What is the name of the hydrate? _____

d. What is the percent of water in the hydrate

14. In an experiment, barium chloride ____ hydrate was heated to remove water. The following data was obtained:

Mass of empty crucible	20.286 g
Mass of crucible & contents before heating	21.673 g
Mass of crucible & contents after heating	21.461 g

a. Determine the formula of the hydrate.

b. The formula of the hydrate = _____

c. What is the name of the hydrate? _____

d. What is the percent of water in the hydrate

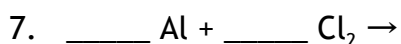
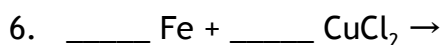
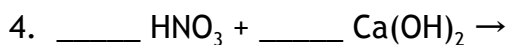
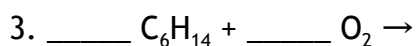
Name: _____ Date: _____ Class Pd. _____

Law of Conservation of Mass <http://tinyurl.com/ofb9qqq>

1. What is the Law of Conservation of Mass:

2. How is the Law of Conservation of Mass applied to written chemical reactions?

Predicting Products of Chemical Reactions: <https://www.youtube.com/watch?v=P0jG2TjLyGI>



Net Ionic Equations <http://tinyurl.com/owf6f37>

8. What 2 things must all net ionic equations have?

9. For the reactions below predict the products, balance the reaction, circle the precipitate and write the net ionic equation. .
 - a. K_3PO_4 (___) + $Al(NO_3)_3$ (___) \rightarrow

 - b. BeI_2 (___) + Cu_2SO_4 (___) \rightarrow

 - c. calcium hydroxide + iron(III) chloride \rightarrow

 - d. rubidium fluoride + copper(II) sulfate \rightarrow