

Stoichiometry Review

Name - _____

- 1.) Solve for the number of grams of oxygen needed to burn 1.06 *moles* of methane, CH_4 , to produce carbon dioxide and water.

- 2.) A camping Lantern uses the reaction of calcium carbide, CaC_2 , and water to produce acetylene gas, C_2H_2 , and calcium hydroxide. How many grams of water are required to produce 1.55 *moles* of acetylene gas?

- 3.) When 7.52 *g* of lead (II) carbonate are reacted with 27.5 *ml* of 3.00 *M* nitric acid, what mass of lead (II) nitrate will be formed?

- 4a.) For the reaction of zinc metal and hydrochloric acid, how many moles of hydrochloric acid are needed to completely react with 12.35 *g* of zinc?

- b.) What volume of 3.00 *M* hydrochloric acid is required to react with 12.35 *g* of zinc?

- c.) How many moles of hydrogen are produced when 12.35 *g* of zinc are reacted with the correct amount of hydrochloric acid?

5a.) If 10.45 g of aluminum are reacted with 66.55 g of copper (II) sulphate, which reactant is in excess?

b.) Calculate the mass of the excess reactant.

c.) Calculate the mass of each product.



After many years of marital bliss, tension enters the Kent household.

6.) If 111.7 g of iron (II) and 212.7 g of chlorine gas completely react, how many grams of product are formed?

7.) If you mix 15.50 g of lead (II) nitrate and 3.81 g of sodium chloride, what mass of each product is produced?

8.) 2.0 L of 0.60 M FeCl_3 solution are mixed with 1.0 L of 0.90 M BaCl_2 solution. No reaction occurs. What is the concentration of each compound in the final solution?