

Unit 4 – Chapter 4: Types of Reactions

Name _____

Assignment #2: Stoichiometry, Precipitates, Net Ionics

Period _____

- 1) For the reactions the below scenarios, write the balanced formula equation, complete ionic equation, and net ionic equation. If no precipitate forms, write “No reaction”.
 - a. $\text{Hg}_2(\text{NO}_3)_2(aq) + \text{CuSO}_4(aq)$
 - b. $\text{Ni}(\text{NO}_3)_2(aq) + \text{CaCl}_2(aq)$
 - c. $\text{K}_2\text{CO}_3(aq) + \text{MgI}_2(aq)$
 - d. $\text{Na}_2\text{CrO}_4(aq) + \text{AlBr}_3(aq)$

- 2) Write net ionic equations for the reaction, if any, that occurs when aqueous solutions of the following are mixed.
 - a. chromium (III) chloride and sodium hydroxide
 - b. silver nitrate and ammonium carbonate
 - c. copper (II) sulfate and mercury (I) nitrate
 - d. strontium nitrate and potassium iodide

- 3) What mass of Na_2CrO_4 is required to precipitate all of the silver ions from 75.0 mL of a 0.100 M solution of AgNO_3 ?

- 4) What volume of 0.100 M Na_3PO_4 is required to precipitate all the lead (II) ions from 150.0 mL of 0.250 M $\text{Pb}(\text{NO}_3)_2$?

- 5) What mass of solid aluminum hydroxide can be produced when 50.0 mL of 0.200 M $\text{Al}(\text{NO}_3)_3$ is added to 200.0 mL of 0.100 M KOH?

- 6) What mass of barium sulfate can be produced when 100.0 mL of a 0.100 M solution of barium chloride is mixed with 100.0 mL of a 0.100 M solution of iron (III) sulfate?