**Homework 3 Chapter 13**

**Directions:**

*for each problem*

1. Write a BCE
2. Determine the insoluble ppt
3. Calculate the theoretical amount of ppt in grams that should form
4. Write the NIE for the reaction
5. Draw at the particulate level the reaction before and after the combining of solutions. Make sure the ion in excess is shown
6. Determine the percent yield and percent error, given the actual amount of ppt formed.

Problems:

1. 25 mL of a 3.0M solution of silver nitrate is added to an excess solution of sodium chloride. If 9.8 grams were actually recovered, what is percent error?
2. 52 mL of a 2.3M solution of ammonium carbonate is mixed with excess magnesium acetate. If 8.9 grams were actually recovered, determine the percent yield and percent error.
3. 5.0 mL of a 1.5M solution of calcium chlorate is mixed with an excess solution of potassium sulfate. If 0.95 grams were actually recovered, determine the percent yield and percent error
4. 100 mL of a 1.5 x 10-2M solution of copper (II) nitrate is combined with excess solution of cesium sulfide. If

1.23 x 10-2 grams were actually recovered determine the percent yield and percent error.