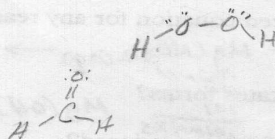
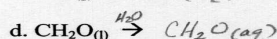
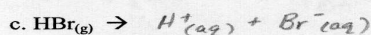
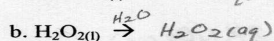
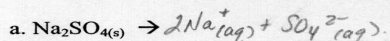


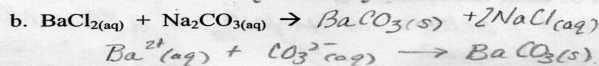
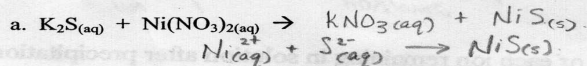
5. Determine which of the following compounds are soluble or insoluble in water using the solubility rules:

- a. lithium hydroxide slightly sol. d. ammonium acetate sol  
 b. calcium sulfate not sol e. lead II chloride sol  
 c. potassium phosphate slightly sol. f. strontium sulfide slightly sol

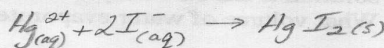
6. Write balanced equations for the following substances dissolving in water:



7. Complete and balance the following and write a net ionic equation for each:



8. Write a balanced equation for the formation of mercury II iodide from a precipitation reaction.



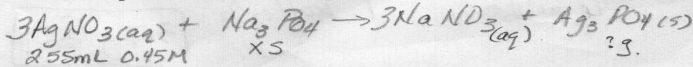
9. How many grams of  $\text{Ca}(\text{ClO}_3)_2$  are contained in 275 mL of a 0.18M  $\text{Ca}(\text{ClO}_3)_2$  solution?

$$275 \text{ mL } \text{Ca}(\text{ClO}_3)_2 \times \frac{1 \text{ L}}{1000 \text{ mL}} \times \frac{0.18 \text{ Mol}}{1 \text{ L}} \times \frac{206.98 \text{ g}}{1 \text{ mol}} = 10.2 \text{ g}$$

10. What is the molarity of a 53.0mL sample of a 0.38M  $\text{CoCl}_2$  solution diluted to a new volume of 1.5 L?

$$0.38 \text{ M} \times 0.0530 \text{ L} = M_2 \times 1.5 \text{ L} \quad 0.013 \text{ M}$$

11. How many grams of silver I phosphate can be expected to form when 255 mL of a 0.45M silver I nitrate solution is mixed with an excess of a sodium phosphate solution. Write a balanced equation for this reaction.



$$255 \text{ mL } \text{AgNO}_3 \times \frac{1 \text{ L}}{1000 \text{ mL}} \times \frac{0.45 \text{ mol } \text{AgNO}_3}{1 \text{ L}} \times \frac{1 \text{ mol } \text{Ag}_3\text{PO}_4}{3 \text{ mol } \text{AgNO}_3} \times \frac{418.67 \text{ g } \text{Ag}_3\text{PO}_4}{1 \text{ mol}} = 16.0 \text{ g } \text{Ag}_3\text{PO}_4$$