

7. MnSO_4 was dissolved in water. What is the ionization equation?
8. A chemist mixes a 225 mL of a 3.8 M Na_2CO_3 solution with 3.8 g of K_2CO_3 . What is the concentration of each ion in this solution?
9. For the following solutions, use a flow chart to describe the process of separating the ions from each other.
- Mg^{2+} , Pb^{2+} and Zn^{2+}
 - OH^- , PO_4^{3-} , S^{2-}
10. Predict the products in the following reactions. Then, balance the equations. Be sure to indicate the state (aq or s), of each product.
- _____ CaCl_2 (aq) + _____ KNO_3 (aq) \rightarrow
 - _____ HCl (aq) + _____ $\text{Ca}(\text{OH})_2$ (aq) \rightarrow

11. Write a formula equation, complete ionic equation and net ionic equation for the following reactions:

a. Strontium hydroxide and zinc chloride

b. Ammonium bromide and copper (I) sulphate

12. Determine whether the following are soluble or have low solubility.

a. Barium chloride soluble / low solubility (*circle one*)

b. $\text{Sn}(\text{OH})_4$ soluble / low solubility (*circle one*)

13. A titration was performed that required 12.7 mL of 0.150 M $\text{Mg}(\text{OH})_2$ to titrate 25.00 mL of a hydrochloric acid, HCl, solution. Determine the molarity of the hydrochloric acid.

