Chem I Name _____

Date _____ Per _____

Review for the Net Ionic Equations Test

Solubility Rules

1. -nitrate and -acetate = (aq)

2. Group 1 (H+, Li+, Na+, K+, Rb+, Cs+, Fr+) and NH_4+ = (aq)

3. -chloride, -bromide, and -iodide = (aq)
   EXCEPT when with Pb, Hg_2, or Ag = (s)

4. -sulfate = (aq)
   EXCEPT when with Ba, Ca, Pb, or Hg_2 = (s)

5. - hydroxide = (s)
   EXCEPT when with Group 1 or NH_4+ = (aq)
   When with Group 2 (Be, Mg, Ca, Sr, Ba, Ra) = (ss)

6. -sulfide, -carbonate, and -phosphate = (s)
   EXCEPT when with Group 1 or NH_4+ = (aq)

1. Would each of these be solid (s) or aqueous (aq) in water? [Hint: try these without looking at the solubility rules first - I b et you'll be surprised how many you can do from memory.}

a. Rb_2S _____ e. AgCl _____ i. $Be(OH)_2$ _____

b. LiOH _____ f. $Fe(NO_3)_3$ _____ j. $CaCO_3$ _____

c. Li_2SO_4 _____ g. $(NH_4)_3PO_4$ _____ k. $Al(C_2H_3O_2)_3$ _____

d. $CaSO_4$ _____ h. $Ba(C_2H_3O_2)_2$ _____ l. $ZnCl_2$ _____

2. Show what happens when each of these are put in water. (Some will dissociate and some won't - use the solubility rules to tell. If something won't dissociate, just show it remaining a solid.)

a. RbF(s) $\xrightarrow{H_2O}$ _____

b. $Al(C_2H_3O_2)_3$(s) $\xrightarrow{H_2O}$ _____

c. $Ca_3(PO_4)_2$(s) $\xrightarrow{H_2O}$ _____

d. $(NH_4)_2CO_3$(s) $\xrightarrow{H_2O}$ _____