Name: _____

Honors Chemistry: ☐ yellow ☐ blue ☐ red

Net Ionic Equations and K_{sp}

For each of the following equations, write the net ionic equation and the expression for the solubility product constant K_{sp}.

1. $Pb(NO_3)_2\,(aq) + 2\,NaCl\,(aq) \longrightarrow PbCl_2\,(s) + 2\,NaNO_3\,(aq)$

2. $CaCl_2\,(aq) + 2\,NaOH\,(aq) \longrightarrow Ca(OH)_2\,(s) + 2\,NaCl\,(aq)$

3. $2\,CuNO_3\,(aq) + Na_2S\,(aq) \longrightarrow Cu_2S\,(s) + 2\,NaNO_3\,(aq)$

4. $MnCl_2\,(aq) + Na_2CO_3\,(aq) \longrightarrow MnCO_3\,(s) + 2\,NaCl\,(aq)$

Calculate the concentrations of the positive and negative ions in each of the following saturated solutions:

5. $BaSO_4$, $K_{sp} = 1.1 \times 10^{-10}$

6. FeS, $K_{sp} = 6.0 \times 10^{-18}$

7. $Al(OH)_3$, $K_{sp} = 4.6 \times 10^{-33}$

8. Hg_2Cl_2, $K_{sp} = 1.3 \times 10^{-18}$