# Solubility:  Effect of Common Ions

## Example One

If the $K_{sp}$ for $CaF_2$ is $3.9 \times 10^{-11}$, calculate the molar solubility of $CaF_2$ at 25 °C in a solution that is:

a.  pure water.

b.  a solution containing 0.20 M $Ca(NO_3)_2$.

**Example Two**

If $K_{sp}$ for $CaF_2$ is $3.9 \times 10^{-11}$, calculate the molar solubility of $CaF_2$ at 25 °C in a solution that is 0.20 M NaF.

**Example Three**

In which solution is AgCl least soluble?
a. 0.10M NaCl
b. 0.15M LiCl
c.  0.10M BaCl$_2$

**Example Four**

Calculate the solubility of Ni(OH)$_2$ in a solutions which is buffered at a pH of 9.00
The K$_{sp}$ for Ni(OH)$_2$ is 6.0 x $10^{-16}$