K_{sp} for $Ca_3(PO_4)_2$ is $K_{sp} = [Ca^{2+}]^3[PO_4^{3-}]^2$ } iClicker Quiz

Net ionic equation only involves the precipitate.

See slides and worksheet for reference

When a precipitate form, some ions of the precipitate are still in solution

Group IA, NH_4^+, and NO_3^- are soluble

Most everything else is insoluble

The concentration of the reactants matters.

Lead II Nitrate = $Pb^{2+} + NO_3^- \rightarrow Pb(NO_3)_2$

See slide notes for the difference between

formula equations, total ionic equations, and net ionic equations

$K_{sp} = [Pb^{2+}][I^-]^2$ does not mean $4x^3$ all the time

When the source is the same, then it's $4x^3$.

Common Ion Effect

If you add insoluble PbI_2 to a KI solution, the $[I^-]$ wont change appreciably. $[Pb^{2+}]$ will be very small.

K_{sp} : At equilibrium

Q_{sp} : Now

If

$Q_{sp} > K_{sp}$ then precipitate will form

$Q_{sp} < K_{sp}$ then no precipitation will occur.

When mixing, change volume accordingly

Q_{sp}: only precipitate matters.