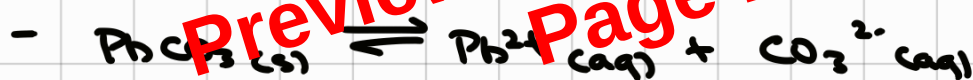


Solubility Equilibria

- $aA + bB \rightleftharpoons cC + dD$
- $K_c = \frac{[C]^c [D]^d}{[A]^a [B]^b}$ —→ Never include solids or H_2O .
- **Saturated Solution**
 - no more solid can be dissolved in a given amount of solvent at a fixed temperature.
- K_s - Solubility Product
 - ↳ K_c equation

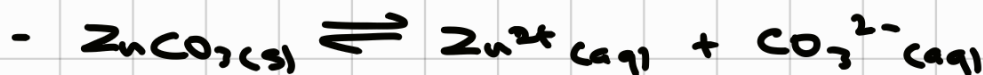
E.g.)



$$\therefore [Pb^{2+}][CO_3^{2-}] = 7.4 \times 10^{-4}$$

$$x^2 = 7.4 \times 10^{-4}$$

$$x = 2.7 \times 10^{-2} \text{ mol l}^{-1}$$



$$K_s = [Zn^{2+}][CO_3^{2-}]$$

$$\downarrow$$
$$4 \times 10^{-7}$$

$$\hookrightarrow 4 \times 10^{-7}$$

$$K_s = (4 \times 10^{-7})^2$$