

## Solutions

---

Each answer shows the steps, then the **result**.

### 2.1

- $K_{sp} = [\text{Ba}^{2+}][\text{SO}_4^{2-}]$

### 2.2

- $K_{sp} = s^2$

### 2.3

- $s = \sqrt{4 \times 10^{-10}} = 2 \times 10^{-5} \text{ M}$

### 3.1 B

- $K_{sp} = s^2$  for a 1:1 salt

### 3.2

(a)

- $[\text{Pb}^{2+}] = s, [\text{Cl}^-] = 2s$

(b)

- $K_{sp} = s(2s)^2 = 4s^3$

### 3.3

- $4s^3 = 3.2 \times 10^{-11}; s^3 = 8 \times 10^{-12}; s = 2 \times 10^{-4} \text{ M}$