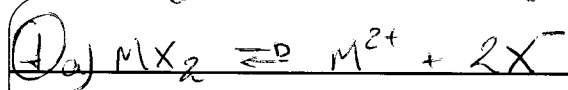


Diagrama de Produto de Solubilidade



$$0,002 \quad 0,002 \quad 0,004$$

$$K_s = [M^{2+}][2x]^2 = 0,002 \cdot 0,004^2 = 3,2 \times 10^{-8}$$



$$\frac{0,045 \text{ mg}}{100 \text{ mL}} = \frac{0,045 \cdot 10^{-3} \text{ g}}{0,1 \text{ L}} = 4,5 \times 10^{-4} \text{ g L}^{-1}$$

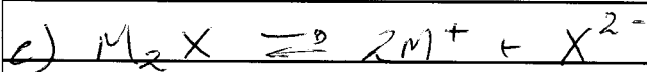
$$M = \frac{C}{MM} = \frac{4,5 \times 10^{-4}}{150} = 3,0 \times 10^{-6} \text{ mol L}^{-1}$$



$$3,0 \times 10^{-6} \quad 6,0 \times 10^{-6} \quad 9,0 \times 10^{-6}$$

$$K_s = [M^{3+}]^2 [X^{2-}]^3$$

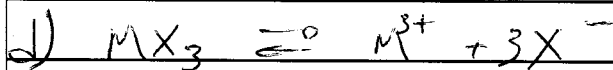
$$K_s = (6,0 \times 10^{-6})^2 (9,0 \times 10^{-6})^3 = 2,62 \times 10^{-26}$$



$$2,0 \times 10^{-10} \quad 4,0 \times 10^{-10} \quad 2,0 \times 10^{-10}$$

$$K_s = [M^{+}]^2 [X^{2-}]$$

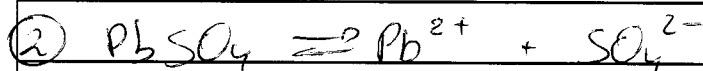
$$K_s = (4,0 \times 10^{-10})^2 \cdot 2,0 \times 10^{-10} = 3,2 \times 10^{-29}$$



$$2,0 \times 10^{-10} \quad 0,1$$

$$K_s = [M^{3+}][X^{-}]^3$$

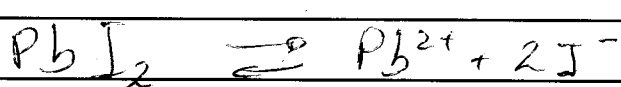
$$K_s = 2,0 \times 10^{-10} \cdot 0,1^3 = 2,0 \times 10^{-13}$$



$$x \quad x \quad x$$

$$K_s = [Pb^{2+}][SO_4^{2-}]$$

$$1,6 \times 10^{-8} = x \cdot x = x^2 \Rightarrow x = \sqrt{1,6 \times 10^{-8}} = 1,26 \times 10^{-4}$$



$$x \quad x \quad 2x$$

$$K_s = x \cdot (2x)^2 = x \cdot 4x^2 = 4x^3$$

$$7,1 \times 10^{-9} = 4x^3$$

$$x = \sqrt[3]{\frac{7,1 \times 10^{-9}}{4}} = 1,21 \times 10^{-3}$$

Devido à proporção estequiométrica de 2:1.