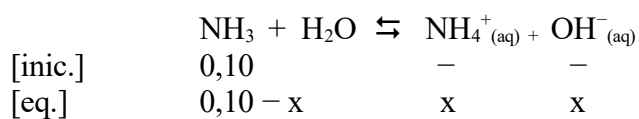


EXEMPLO 9: Calcula o pH dunha disolución 0,10M de  $\text{NH}_3$ .  $K_b=1,79 \cdot 10^{-5}$



$$K_b = \frac{[\text{NH}_4^+] \cdot [\text{OH}^-]}{[\text{NH}_3]} = \frac{x^2}{0,10 - x} = 1,79 \cdot 10^{-5}$$

como  $K_b \ll 0,1 \Rightarrow x \ll 0,10 \Rightarrow 0,10 - x \approx 0,10$

$$\frac{x^2}{0,10} = 1,79 \cdot 10^{-5} \quad x = \sqrt{0,10 \cdot 1,79 \cdot 10^{-5}} = 1,34 \cdot 10^{-3} \text{ M} = [\text{OH}^-]$$

$$pOH = -\log[\text{OH}^-] = -\log 1,34 \cdot 10^{-3} = 2,87$$

$$pH = 14 - pOH = 14 - 2,87 = \underline{11,13}$$