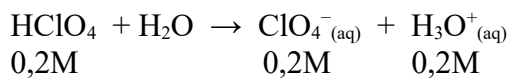


Problema731: Calcula a $[H_3O^+]$, $[OH^-]$, pH e pOH de: a) Unha disolución 0,2M de $HClO_4$. b) Unha disolución 0,035M de $NaOH$.

a) Un ácido forte está totalmente dissociado:



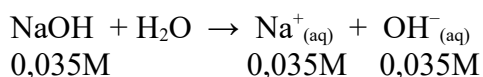
$$[H_3O^+] = \underline{0,2M}$$

$$[OH^-] = \frac{K_w}{[H_3O^+]} = \frac{1 \cdot 10^{-14}}{0,2} = \underline{5 \cdot 10^{-14} M}$$

$$pH = -\log[H_3O^+] = -\log 0,2 = \underline{0,70}$$

$$pOH = -\log[OH^-] = -\log 5 \cdot 10^{-14} = \underline{13,30}$$

b) Un base forte está totalmente dissociada:



$$[OH^-] = \underline{0,035M}$$

$$[H_3O^+] = \frac{K_w}{[OH^-]} = \frac{1 \cdot 10^{-14}}{0,035} = \underline{2,86 \cdot 10^{-13} M}$$

$$pOH = -\log[OH^-] = -\log 0,035 = \underline{1,46}$$

$$pH = -\log[H_3O^+] = -\log 2,86 \cdot 10^{-13} = \underline{12,54}$$