

Chem12 pH and pOH : Notes/W.S.-70

Recall that : $\log(AxB) = \log A + \log B$. Since $[H_3O^+][OH^-] = 10^{-14}$, we have :

$$\log \{[H_3O^+][OH^-]\} = \log 10^{-14}, \text{ or } \log [H_3O^+] + \log [OH^-] = \log 10^{-14}$$

Therefore : $- \text{pH} + - \text{pOH} = -14.0$, or **pH + pOH = 14.0** .

Exercise : Find the pOH given the pH below.

1)a) pH = 3.0, pOH = _____ , b) pH = 10.0, pOH = _____ .

Exercise : Find the pH given the pOH below.

2)a) pOH = 2.5, pH = _____ , b) pOH = 0.0, pH = _____ .

Answers : 1)a) 11.0, b) 4.0, 2)a) 11.5, b) 14.0.