Useful Formulas:

$pH = - \log [H_3O^+]$ $\quad\quad$ $pH + pOH = 14$

$pOH = - \log [OH^-]$ $\quad\quad$ $Kw = [H_3O^+][OH^-]$

1. What is the pH of a solution where $[H_3O^+] = 1.2 \times 10^{-3}$ M?

Useful Formulas:

$pH = - \log [H_3O^+]$ $\quad\quad$ $pH + pOH = 14$

$pOH = - \log [OH^-]$ $\quad\quad$ $Kw = [H_3O^+][OH^-]$

2. What is the $[H_3O^+]$ when the pH is 2.55?

Useful Formulas:

$pH = - \log [H_3O^+]$ $\quad\quad$ $pH + pOH = 14$

$pOH = - \log [OH^-]$ $\quad\quad$ $Kw = [H_3O^+][OH^-]$

3. What is the pOH of a solution with $[OH^-] = 4.4 \times 10^{-4}$ M?

Useful Formulas:

$pH = - \log [H_3O^+]$ $\quad\quad$ $pH + pOH = 14$

$pOH = - \log [OH^-]$ $\quad\quad$ $Kw = [H_3O^+][OH^-]$

4. What is the pH of a solution if the pOH is 10.2?

Useful Formulas:

$pH = - \log [H_3O^+]$ $\quad\quad$ $pH + pOH = 14$

$pOH = - \log [OH^-]$ $\quad\quad$ $Kw = [H_3O^+][OH^-]$

5. What is the $[H_3O^+]$ if the $[OH^-]$ is 3.50×10^{-5} M?

Useful Formulas:

$pH = - \log [H_3O^+]$ $\quad\quad$ $pH + pOH = 14$

$pOH = - \log [OH^-]$ $\quad\quad$ $Kw = [H_3O^+][OH^-]$

6. What is the pOH if the $[H_3O^+]$ is 1.7×10^{-4} M?

Useful Formulas:

$pH = - \log [H_3O^+]$ $\quad\quad$ $pH + pOH = 14$

$pOH = - \log [OH^-]$ $\quad\quad$ $Kw = [H_3O^+][OH^-]$

7. What is the $[OH^-]$ if the pH is 3.25?