

Answer on Question #79620, Chemistry/ General Chemistry

A solution has $[H_3O^+] = 3.2 \times 10^{-5} \text{ M}$. Use the ion product constant of water $K_w = [H_3O^+][OH^-]$

to find the $[OH^-]$ of the solution.

Express your answer to two significant figures.

View Available Hint(s)

$[OH^-] =$

nothing

M

Solution

$$K_w = [H_3O^+][OH^-]$$

$$K_w = 1 \times 10^{-14}$$

$$[OH^-] = \frac{K_w}{[H_3O^+]}$$

$$[OH^-] = \frac{1 \times 10^{-14}}{3.2 \times 10^{-5}} = 3.1 \times 10^{-10}$$

Answer: 3.1×10^{-10}