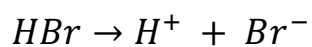


**Answer on Question #59704, Chemistry / General Chemistry**

$9.00 \times 10^{-3}$  mol of HBr are dissolved in water to make 15.0 L of solution. What is the concentration of hydroxide ions,  $[OH^-]$ , in this solution?



$$[HBr] = \frac{9.00 \cdot 10^{-3} \text{ mol}}{15.0 \text{ L}} = 6 \cdot 10^{-4} \text{ M}$$

$$[H^+] = [HBr] = 6 \cdot 10^{-4} \text{ M}$$

$$[H^+] \cdot [OH^-] = 10^{-14}$$

$$[OH^-] = \frac{10^{-14}}{[H^+]}$$

$$[OH^-] = \frac{10^{-14}}{6 \cdot 10^{-4}} = 1.67 \cdot 10^{-11}$$