

General Chemistry
Mr. MacGillivray
Quiz #39:
pH Calculations II

$$\text{pH} = -\log[\text{H}_3\text{O}^+]$$

$$\text{pOH} = -\log[\text{OH}^-]$$

$$\text{pOH} + \text{pH} = 14$$

$$[\text{H}_3\text{O}^+] \times [\text{OH}^-] = 1.00 \times 10^{-14} = K_w$$

1. Write the chemical equation for the dissociation of $\text{Al}(\text{OH})_3$ when it dissolves in water.

2. What is the $[\text{OH}^-]$ of 0.00567 M $\text{Al}(\text{OH})_3$ (aq)?

A 16.5 mL sample of 0.215 M NaOH required 30.3 mL of HCl solution to reach the endpoint of an acid-base titration.

3. Write the equation for the chemical reaction.

4. Calculate the molarity of the original HCl solution.