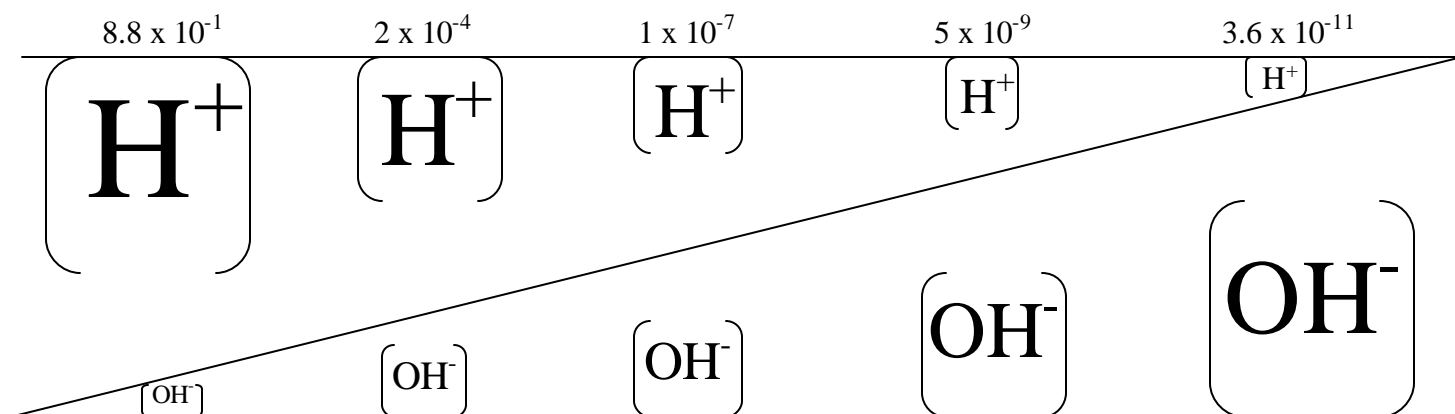


17 • Acid-Base Equilibria

pH PRACTICE



- Write the pH of each solution above the $[H^+]$'s. $pH = -\log[H^+]$
- Label the "Z" diagram as "Acidic", "Basic" and "Neutral."
- Knowing that the $[H^+] \times [OH^-]$ always equals 1×10^{-14} , fill in the $[OH^-]$ for each of the five solutions in the "Z" Diagram. (1×10^{-14} is called the Dissociation Constant for water, K_w) ($1 \times 10^{-14} = 10 \times 10^{-15}$)
- Write the "pOH" of each solution below the $[OH^-]$'s.
- $pH + pOH$ always equals _____.
- A solution of acid has $[H^+] = 3.0 \times 10^{-3} M$
 - Calculate the $[OH^-]$ _____
 - Calculate the pH _____ the pOH _____
- A solution of base has an $[OH^-] = 4.25 \times 10^{-5} M$
 - Calculate the $[H^+]$ _____
 - Calculate the pH _____ the pOH _____
- Calculate the pH's of the following solutions:
 - $2.53 \times 10^{-2} M HCl$ $pH =$
 - $2.53 \times 10^{-4} M HCl$ $pH =$
 - $2.53 \times 10^{-5} M HCl$ $pH =$

A pH with 3 significant figures is written with _____ numbers after the decimal place.