Acid-Base Formulas

Name	Formula	
pH	$pH = -\log[H^+]$	[H+] is the hydrogen ion concentration, measured in moles per liter (Molarity)
pOH	$pOH = -\log[OH^-]$	[OH-] is the hydroxide ion concentration, measured in moles per liter (Molarity)
	$pH + pOH = 14.00$	
Acid-Base Titration	$V_aM_a = V_bM_b$	Used in titrations to determine a volume or concentration of an acid or base. a and b refer to "acid" and "base", and M = Concentration (Molarity)
Henderson-Hasselbach Equation	$pH = pK_a + \log\frac{[A^-]}{[HA]}$	Useful for estimating the pH of a buffer solution and finding the equilibrium pH in acid-base reactions HA = Generic acid A^- = Conjugate base of the acid
	$pOH = pK_b + \log\frac{[HB^+]}{[B]}$	B = Generic base HB^+ = Conjugate acid of the base
pKa	$pK_a = -\log K_a$	Acid Dissociation Constant.
pKb	$pK_a = -\log K_a$	Base Dissociation Constant.
Ka	$K_a = \frac{[H^+][A^-]}{[HA]}$	Equilibrium constant for a weak acid.
Kb	$K_b = \frac{[OH^-][HB^+]}{[B]}$	Equilibrium constant for a weak base.
Kw	$K_w = [OH^-][H^+] = 1.0 \cdot 10^{-14}$	Equilibrium constant for water (at 25°C).
	$K_w = K_a \cdot K_b$	