

Chemistry Equations

$E = hf$	$E = hc/\lambda$	$p = qd$	$\text{rate} = k \cdot [A]^x \cdot [B]^y$
$\Delta U = Q - W$	$q = mc\Delta t$	$q = mL$	$\Delta S = \Delta Q/T$
$\Delta G = \Delta H - T\Delta S$	$\Delta G^\circ = -RT\ln(K_{eq})$	$\Delta G = \Delta G^\circ + RT\ln(Q)$	$PV = nRT$
$P_t = P_a + P_b + P_c + \dots$	$P_a = X_a \cdot P_t$	$[A] = k_H \cdot P_a$	$KE = 1/2mv^2 = 3/2k_B T$
$\text{rate}_1/\text{rate}_2 = (M_2/M_1)^{(1/2)}$	$M = \text{mol/L}$	$M = \text{mol/Kg}$	$P = XP^\circ$
$\Delta T = iK_m$	$\pi = iMRT$	$pH = -\log[H^+]$	$pOH = -\log[OH^-]$
$pH = pK_a + \log[A^-]/[HA]$	$\Delta G^\circ = -nFE^\circ_{\text{cell}}$	$E_{\text{cell}} = E^\circ_{\text{cell}} - 0.0592 \log(Q)/n$	$[\alpha] = \alpha_{\text{obs}}/(c \cdot l)$
$R_f = \text{Distance Spot Moved} / \text{Distance Solvent Front Moved}$			

Physics Equations

$F_g = G((m_1 m_2)/r^2)$	$0 \leq F_s \leq \mu_s N$	$F_k = \mu_k N$	$\bar{v} = \Delta x/\Delta t$
$\bar{a} = \Delta v/\Delta t$	$x = v_0 t + (a \cdot t^2)/2$	$v^2 = v_0^2 + 2ax$	$F = m \cdot a$
$F_c = m((v^2)/r)$	$\tau = r \cdot F$	$KE = 1/2mv^2$	$PE = mgh$
$EPE = 1/2k(x^2)$	$W = F \cdot d$	$W = P\Delta V$	$P = W/t$
$\text{Mech. Adv.} = F_{\text{out}}/F_{\text{in}}$	$\text{Efficiency} = W_{\text{out}}/W_{\text{in}} = (\text{load} \times \text{load distance})/(\text{effort} \times \text{effort distance})$		$\Delta L = \alpha L \Delta T$
$\Delta V = \beta V \Delta T$	$\rho = m/V$	$SG = \rho/\rho \text{ (water)}$	$P = P_o + \rho gh$
$P_{\text{gauge}} = P - P_{\text{atm}} = (P_o + \rho gh) - P_{\text{atm}}$	$P = F_1/A_1 = F_2/A_2$	$F_{\text{buoy}} = (\rho_{\text{fluid}})(V_{\text{fluid}})(g)$	$Q = (\Delta P \pi r^4)/(8\eta L)$
$Q = v_1 A_1 = v_2 A_2$	$P_1 + 1/2\rho v_1^2 + \rho gh_1 = P_2 + 1/2\rho v_2^2 + \rho gh_2$	$F_e = k((q_1 \cdot q_2)/r^2)$	$E = Fe/q$
$E = k(Q/(r^2))$	$U = k(Qq/r)$	$V = U/q$	$V = kQ/r$
$\Delta V = V_a - V_b$	$\Delta V = W_{ab}/q$	$B = (\mu_o \cdot I)/(2\pi r)$	$B = \text{Magnetic Field (T or N}\cdot\text{s/C}\cdot\text{m)}$
$F_b = qvB \sin \theta$	$F_b = ILB \sin \theta$	$I = Q / \Delta t$	$R = \rho L/A$
$V = IR$	$V = E_{\text{cell}} - (i \cdot r_{\text{int}})$	$P = IV$	$P = (I^2)R$
$P = (V^2)/R$	$C = Q/V$	$C = \epsilon_o (A/d)$	$E = V/d$
$U = 1/2CV^2$	$v = f\lambda$	$T = 1/f$	$\omega = 2\pi f$
$v = (B/\rho)^{(1/2)}$	$\Delta f/f = \Delta v/v$	$I = P/A$	$\beta = 10 \log(I/I_0)$
$\lambda = 2L/n$	$\lambda = 4L/n$	$1/f = 1/o + 1/i$	$m = -i/o$
$n = c/v$	$n_1 \cdot \sin(\theta_i) = n_2 \cdot \sin(\theta_r)$	$P = 1/f$	$1/f = 1/f_1 + 1/f_2 + 1/f_3 + \dots + 1/f_n$
$m = m_1 \cdot m_2 \cdot m_3 \cdot \dots \cdot m_n$	$K_{\text{max}} = E - W = hf - hf_r$	$E = mc^2$	

Biochemistry/Biology Equations

$pI = (pK_{a1} + pK_{a2})/2$	$v = (v_{\text{max}} \cdot [S]) / (K_m + [S])$	$E = (61.5/z) \log([ion]_{\text{out}}/[ion]_{\text{in}})$	$V_m = 61.5 \log ((P_{\text{Na}} \cdot [Na^+]_{\text{out}} + P_k \cdot [K^+]_{\text{out}}) / (P_{\text{Na}} \cdot [Na^+]_{\text{in}} + P_k \cdot [K^+]_{\text{in}}))$
$p + q = 1$	$p^2 + 2pq + q^2 = 1$	$CO = HR \cdot SV$	$\Delta P = CO \times TPR$

Behavioral Science Equations

$IQ = \text{Mental Age} / \text{Chronological Age} \times 100$		
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