Possibly useful relations:

$T(K) = T(^\circ C) + 273.15$	$T(^\circ F) = \frac{9}{5}T(^\circ C) + 32^\circ$	$\Delta L = \alpha L \Delta T$
$\Delta V = \beta V \Delta T$	$PV = nRT$	$PV = NkT$
$n = N/N_A$	$v_{\text{rms}} = \sqrt{\frac{3kT}{m}}$	$\overline{\text{KE}} = \frac{1}{2}m\overline{v^2} = \frac{3}{2}kT$
$Q = mc\Delta T$	$Q = mL_V$	$Q = mL_f$
$Q = mL_s$	$\frac{Q}{t} = \frac{\kappa A(T_2 - T_1)}{d}$	$\frac{Q}{t} = \sigma\epsilon A(T_{\text{hot}}^4 - T_{\text{cold}}^4)$
$W = P\Delta V$	monoatomic: $\Delta U = \frac{3}{2}nR\Delta T$	diatomic: $\Delta U = \frac{5}{2}nR\Delta T$
	$\Delta U = Q - W$	
Isochoric: $\Delta V = 0$	Isothermal: $\Delta T = 0$	Isobaric: $\Delta P = 0$
Adiabatic: $\Delta Q = 0$	$\epsilon = \frac{W}{Q_H} = 1 - \frac{Q_C}{Q_H}$	$\epsilon_{\text{Carnot}} = 1 - \frac{T_C}{T_H}$
$\text{COP}_{\text{ref}} = \frac{Q_C}{W}$	$\text{COP}_{\text{hp}} = \frac{Q_H}{W}$	
$S = (\frac{Q}{T})_{\text{reversible}}$	$\Delta S_{\text{closed}} \geq 0$	$S = k \ln W$
W = (# microstates)/macrostate		
$F = \frac{k\lvert q_1\rvert\lvert q_2\rvert}{r^2}$	$\vec{F} = q\vec{E}$	$E = \frac{kQ}{r^2}$
$\vec{E} = \vec{E}_1 + \vec{E}_2 + \vec{E}_3 + ...$	$V = \frac{PE}{q}$	$V = Ed$
$V = \frac{kQ}{r}$	$Q = CV$	$C = \kappa\frac{\epsilon_0 A}{d}$
$E_{\text{cap}} = \frac{1}{2}QV = \frac{1}{2}CV^2 = \frac{Q^2}{2C}$		$C_p = C_1 + C_2 + C_3 + ...$
$\frac{1}{C_s} = \frac{1}{C_1} + \frac{1}{C_2} + \frac{1}{C_3} + ...$	$I = \frac{\Delta Q}{\Delta t}$	$I = nqAv_d$
$V = IR$	$R = \rho\frac{l}{A}$	$\rho = \rho_0(1 + \alpha\Delta T)$
$P = IV$	$P = I^2R$	$P = V^2/R$
$V = V_0 \sin(2\pi ft)$	$I = I_0 \sin(2\pi ft)$	$P = I_0V_0 \sin^2(2\pi ft)$
$P_{\text{av}} = \frac{1}{2}I_0V_0 = I_{\text{rms}}V_{\text{rms}}$	$I_{\text{rms}} = I_o/\sqrt{2}$	$V_{\text{rms}} = V_o/\sqrt{2}$
$R_S = R_1 + R_2 + R_3 + ...$	$\frac{1}{R_p} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3} + ...$	$P = E/t$
$\tau = RC$	$V = V_0 \exp^{-t/\tau}$	$V = V_0(1 - \exp^{-t/\tau})$
$F = \lvert q\rvert vB \sin\theta$	$r = \frac{mv}{qB}$	$m = \frac{qB^2r^2}{2V}$
$v = E/B$	$V_{\text{Hall}} = Blv$	$F = ILB \sin\theta$
$\tau = NIAB \sin\theta$	$B = \frac{\mu_o I}{2\pi r}$	$B = \frac{\mu_o I}{2R}$
$B = \mu_0 nI$	$\frac{F}{l} = \frac{\mu_o I_1 I_2}{2\pi r}$	$\vec{B} = \vec{B}_1 + \vec{B}_2 + \vec{B}_3 + ...$
$\phi = BA \cos\theta$	$\epsilon = -N\frac{\Delta\phi}{\Delta t}$	$\epsilon = NBA\omega \sin\omega t$

$\epsilon = Blv$	$\frac{I_s}{I_p} = \frac{V_p}{V_s} = \frac{N_p}{N_s}$	$c = 1/\sqrt{\epsilon_0 \mu_0}$
$c = \lambda f$	$c = \frac{E}{B}$	$n = c/v$
$I = P/A$	$I_{\text{ave}} = \frac{1}{2} c\epsilon_0 E_0^2 = \frac{1}{2\mu_0} c B_0^2 = \frac{1}{2\mu_0} E_0 B_0$	
$I_0 = 2I_{\text{ave}}$	$\theta_{inc} = \theta_{ref}$	$n_1 \sin\theta_1 = n_2 \sin\theta_2$
$\theta_C = \sin^{-1} \frac{n_2}{n_1}$	$P = 1/f$	$m = -\frac{d_i}{d_o} = \frac{h_i}{h_o}$
$\frac{1}{d_i} + \frac{1}{d_o} = \frac{1}{f}$	$f = \frac{R}{2}$	$m = m_1 m_2 m_3 ...$
$m_{\text{total}} = m_o m_e$	$M = \theta'/\theta$	$M = -f_o/f_e$
$d \sin\theta = m\lambda$ (m=0,1,2,...)	$d \sin\theta = (m + \frac{1}{2})\lambda$	$m^{\max} = d/\lambda$
$D \sin\theta = m\lambda$ (m=1,2,3...)	$\theta_{\min} = 1.22 \frac{\lambda}{D}$	$2t = m\lambda_2$ (m=1,2,3...)
$2t = (m - \frac{1}{2})\lambda_2$	$I = I_0 \cos^2\theta$	$\tan\theta_B = \frac{n_2}{n_1}$
$\text{KE} = hf - \text{BE}$	$E_\gamma = hf = h\frac{c}{\lambda}$	$p = h/\lambda$
$E_\gamma = hf = E_i - E_f$	$\frac{1}{\lambda} = R(\frac{1}{n_f^2} - \frac{1}{n_i^2})$	$L = \frac{nh}{2\pi}$ (n=1,2,3...)
$r_n = \frac{n^2 a_B}{Z}$ (n=1,2,3...)	$a_B = (\frac{h}{2\pi})^2 \frac{1}{mkq^2}$	$E_n = -\frac{Z^2}{n^2} E_0$ (n=1,2,3...)
$A = Z + N$	$r = r_0 A^{1/3}$	$E = mc^2$
$\Delta m = Z({}^1H) + N(m_N) - m({}^AX)$		$N = N_0 e^{-\lambda t}$
$\lambda = \frac{0.693}{t_{1/2}}$	$R = \frac{\Delta N}{\Delta t} = \lambda N$	1 rad = 0.01 J/kg
rem = rad × RBE		

$R = 8.314$ J/(mol · K)	$N_A = 6.02 \times 10^{23}$ mol^{-1}	$k = 1.38 \times 10^{-23}$ J/K
$\sigma = 5.69 \times 10^{-8}$ J/(s · m^2 · K^4)		
1 cal = 4.186 J	1 kcal = 10^3 cal	1 Liter = 10^{-3} m^3
1 atm = 10^5 Pa	$\lvert q_e \rvert = 1.60 \times 10^{-19}$ C	$k = 9.0 \times 10^9$ N · m^2/C^2
$\epsilon_0 = 8.85 \times 10^{-12}$ C^2/(N · m^2)		$\mu_0 = 4\pi \times 10^{-7}$ T · m/A
$c = 3.00 \times 10^8$ m/s	$h = 6.626 \times 10^{-34}$ J · s	1 eV= 1.6×10^{-19} J
$R = 1.097 \times 10^7$ m^{-1}	$E_0 = 13.6$ eV	$a_B = 0.529 \times 10^{-10}$ m
$r_0 = 1.2 \times 10^{-15}$ m	1 $u = 1.66 \times 10^{-27}$ kg = 931.5 MeV/c^2	