$\Phi = \oint \vec{E} \cdot d\vec{A} = \frac{q_{enc}}{\varepsilon_0}$	$\Phi_M = \oint \vec{B} \cdot d\vec{A} = 0$
$EMF = \oint \vec{E} \cdot d\vec{s} = -\frac{d\Phi_M}{dt}$	$\oint \vec{B} \cdot d\vec{s} = \mu_0 I_{enc} + \mu_0 \varepsilon_0 \frac{d\Phi_E}{dt}$

$F = \frac{kq_1 q_2}{r^2}$	$\vec{E} = \sum \frac{kq_i}{r_i^2}\hat{r}_i$	$E = \int \frac{kdq}{r^2}\hat{r}$	$\Phi_E = \int \vec{E} \cdot d\vec{A}$
$E = \sigma / \varepsilon_0$	$V = \sum \frac{kq_i}{r_i}$	$V = \int \frac{kdq}{r}$	$E_x = -\frac{dV}{dx}$
$U = \sum \frac{kq_i q_j}{r_{ij}}$	$\Delta V = -Ed$	$\Delta V = V_B - V_A = \frac{\Delta U}{q_0} = -\int_A^B \vec{E} \cdot d\vec{s}$	
$I = \frac{dq}{dt} = nqv_d A$	$\vec{J} = \frac{\vec{I}}{A} = \sigma \vec{E} = \frac{1}{\rho}\vec{E}$	$P = VI = I^2 R = V^2 / R$	
$R = V / I = \frac{\rho l}{A}$	$R_{eq} = R_1 + R_2 + \ldots$	$\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2} + \ldots$	$\rho = \rho_0 [1 + \alpha(T - T_0)]$
$C = Q / V = \frac{\varepsilon_0 A}{d}$	$C_{eq} = C_1 + C_2 + \ldots$	$\frac{1}{C_{eq}} = \frac{1}{C_1} + \frac{1}{C_2} + \ldots$	$C = \kappa C_0$
$U = \frac{1}{2}CV^2 = \frac{Q^2}{2C}$	$Q(t) = Q_0(1 - e^{-t/\tau})$	$Q(t) = Q_0 e^{-t/\tau}$	$\tau = RC$
$\vec{F} = q(\vec{E} + \vec{v} \times \vec{B})$	$\vec{F} = I\vec{L} \times \vec{B}$	$\vec{\mu} = I\vec{A}$	$\vec{\tau} = \vec{r} \times \vec{F} = \vec{\mu} \times \vec{B}$
$qvB = \frac{mv^2}{r}$	$d\vec{B} = \left(\frac{\mu_0}{4\pi}\right)\frac{Id\vec{s} \times \hat{r}}{r^2}$	$\Phi_M = \int \vec{B} \cdot d\vec{A}$	
$B = \frac{\mu_0 I}{2\pi r}$	$B = \mu_0 nI$	$B = \frac{\mu_0 I}{2r}$	$\frac{F}{l} = \frac{\mu_0 I_1 I_2}{2\pi r}$
$EMF = -L\frac{dI}{dt}$	$EMF_{21} = -M\frac{dI_1}{dt}$	$\frac{V_2}{V_1} = \frac{N_2}{N_1} = \frac{I_1}{I_2}$	$U = \frac{1}{2}LI^2$
$L = \mu_0 n^2 lA$	$I(t) = I_0(1 - e^{-t/\tau})$	$I(t) = I_0 e^{-t/\tau}$	$\tau = L / R$
$\omega_0 = \frac{1}{\sqrt{LC}}$	$X_L = \omega L$	$X_C = \frac{1}{\omega C}$	$\langle P \rangle = I_{RMS}^2 R = I_{RMS}^2 Z \cos\phi$
$I(t) = I_{\max}\sin(\omega t - \phi)$	$Z = \sqrt{R^2 + (X_L - X_C)^2}$		$\tan\phi = \frac{X_L - X_C}{R}$
$\frac{\partial^2 E}{\partial x^2} = \varepsilon_0 \mu_0 \frac{\partial^2 E}{\partial t^2}$	$\omega = 2\pi f = \frac{2\pi}{T}$	$\frac{\omega}{k} = \lambda f = v$	
$E(x,t) = E_0 \cos(kx - \omega t)$	$u_E = \frac{\varepsilon_0 E^2}{2}$	$u_M = \frac{B^2}{2\mu_0}$	$\frac{E}{B} = c = \frac{1}{\sqrt{\varepsilon_0 \mu_0}}$
$\vec{S} = \frac{\vec{E} \times \vec{B}}{\mu_0}$	$\langle S \rangle = c\langle u \rangle = \frac{E_{\max} B_{\max}}{2\mu_0}$	$\frac{F}{A} = \frac{S}{c} = u$	$P = \int \vec{S} \cdot d\vec{A}$
$n_1 \sin\theta_1 = n_2 \sin\theta_2$	$\sin\theta_c = \frac{n_2}{n_1}$	$v = \frac{c}{n}$	$\lambda_n = \frac{\lambda_0}{n}$
$d\sin\theta = m\lambda$	$2nt = m\lambda$	$\theta_{\min} \approx \frac{\lambda}{D}$	$\sin\theta = \frac{m\lambda}{a}$
$I = 4I_0 \cos^2\left(\frac{\pi d}{\lambda}\sin\theta\right)$		$I = I_{\max}\frac{\sin^2\alpha}{\alpha}$	$\alpha = \frac{\pi a \sin\theta}{\lambda}$