

$$W = \frac{B^2 \times Vol}{2\mu_o} \quad F = \frac{B^2 \times Area}{2\mu_o} \quad emf = NBA\omega \sin(\omega t)$$

$B = \mu H$	$\mu_r = \frac{\mu}{\mu_o}$	$\mu_o = 4\pi \times 10^{-7}$
$W = \frac{1}{2} \int_{vol} B \cdot H \, dv$	$NI = \oint \vec{H} \cdot \vec{dl}$	$\mu_o \iint J \cdot \partial s = \oint \vec{B} \cdot \vec{dl}$
$B = \frac{\Phi}{A}$	$V_L = -N \frac{\partial \Phi}{\partial t}$	$V_L = -L \frac{\partial I}{\partial t}$
$mmf = N \cdot I$	$mmf = H \cdot l$	$R_m = \frac{l}{\mu A}$
$R_m = \frac{mmf}{\Phi}$	$F = NBIl \sin \theta$	$\tau = F \times w$