

Stuff that may help!

$$F = ilB \sin \phi$$

$$F = qvB \sin \phi$$

$$B = \frac{\mu_0 i}{2\pi r}$$

$$\frac{F}{l} = \frac{\mu_0 i_1 i_2}{2\pi d}$$

$$\mathcal{E} = -N \frac{\Delta \Phi}{\Delta t}$$

$$\Phi = BA$$

$$Z = \sqrt{R^2 + (X_L - X_C)^2}$$

$$X_L = \omega L$$

$$X_C = \frac{1}{\omega C}$$

$$\mathcal{E} = IZ$$

$$V_{C \text{ or } L} = IX$$

$$\tan \phi = \frac{X_L - X_C}{R}$$

$$F = ma$$

$$\omega = 2\pi f$$

$$\mu_0 = 4\pi \times 10^{-7} \frac{T \cdot m}{A}$$

$$e = 1.6 \times 10^{-19} C$$

$$m_e = 9.11 \times 10^{-31} kg$$

$$\mu = 10^{-6}$$

$$n = 10^{-9}$$



$$\frac{1}{R_{tot}} = \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_3}$$

$$R_{tot} = R_1 + R_2 + R_3$$

$$V = iR$$

$$i = \frac{V}{R}$$