Equations for AC Circuits + Radios test

$$X_C = \frac{1}{2\pi\nu C}$$

$$X_L = 2\pi\nu L$$

$$Z = \left[\left(R_{net}\right)^2 + \left(X_L - X_C\right)^2 \right]^{\frac{1}{2}}$$

$$\nu_{res} = \frac{1}{2\pi}\sqrt{\frac{1}{LC}}$$

$$\theta = \tan^{-1}\left(\frac{X_L - X_C}{R_{net}} \right)$$

$$V_{RMS} = .707 V_o$$

$$i_{RMS} = .707 i_o$$

$$V_{RMS} = i_{RMS} Z$$