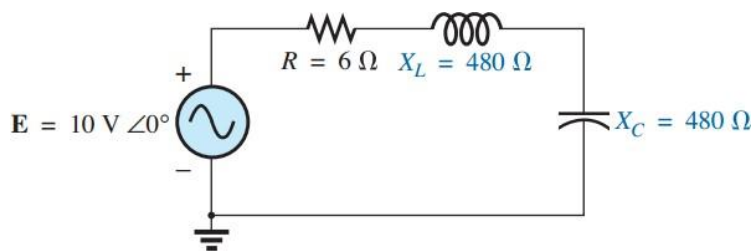


1. Calcule o Fator de Qualidade dos circuitos abaixo:

a) Frequência 60Hz



**Resolução:**

$$Z_{\text{equivalente}} = 966 \, \Omega$$

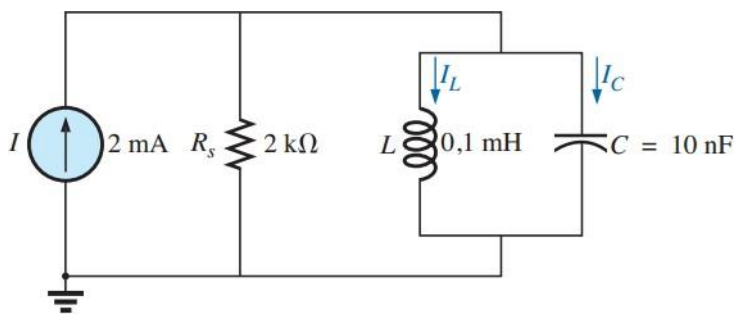
$$i = 966 \Omega \angle 0^\circ$$

$$V_R = 966 * 0,10 \angle 0^\circ = 96,6 \angle 0^\circ \, \text{V}$$

$$V_L = 480 \Omega * 0,10 \angle 0^\circ = 48 \angle 0^\circ \, \text{V}$$

$$V_C = 480 \Omega * 0,10 \angle 0^\circ = 48 \angle 0^\circ \, \text{V}$$

b)



**Resolução:**

$$Q = \omega_0 RC$$

$$\omega_0 = \frac{1}{\sqrt{0,1 \text{ mH} * 10 \text{ nF}}} = \frac{1}{\sqrt{10^{-12}}} = 10^6 \text{ rad/s}$$

$$Q = \omega_0 RC = 10^6 * 2 \text{ k}\Omega * 10 \text{ nF} = 20$$