

9.)  $R=100\Omega$   $L=0,2H$   $C=20\mu F$   $f=50Hz$   $U_{eff}=230V$

a.)  $I_0=?$   $I_{eff}=?$   $P=?$

b.)  $f_R=?$       c.)  $f=f_R$   $I_{OR}=?$   $I_{effR}=?$   $P_R=?$

$$Z = \sqrt{R^2 + \left(L\omega - \frac{1}{\omega C}\right)^2}$$

$$I_{eff} = \frac{U_{eff}}{Z}$$

$$I_0 = I_{eff} \cdot \sqrt{2}$$

$$f_R = \frac{1}{2\pi\sqrt{LC}}$$

$$P = I_{eff}^2 R$$

a.)  $Z = \sqrt{R^2 + \left(L\omega - \frac{1}{\omega C}\right)^2} = \dots$        $I_{eff} = \frac{U_{eff}}{Z} = \dots$        $I_0 = I_{eff} \cdot \sqrt{2} = \dots$

$$P = I_{eff}^2 R = \dots$$

b.)  $f_R = \frac{1}{2\pi\sqrt{LC}} = \dots$

c.) rezonancia  $\rightarrow Z = R$

$$I_{effR} = \frac{U_{eff}}{R} = \dots$$

$$I_0 = I_{eff} \cdot \sqrt{2} = \dots$$

$$P_R = I_{effR}^2 \cdot R = \dots$$