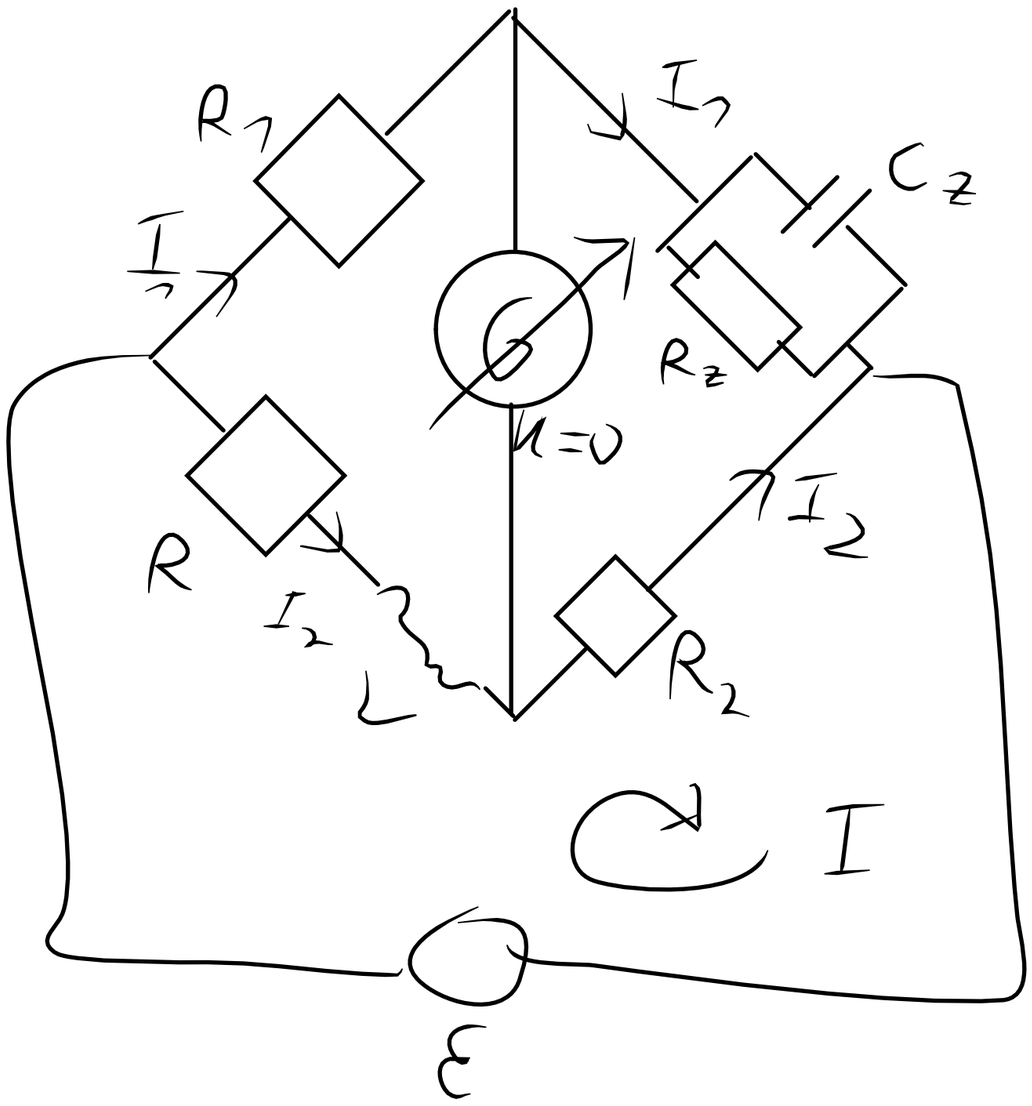

$$Z_{cewki} = i\omega L$$

$$Z_{kondensatora} = \frac{1}{i\omega C}$$

$$Z_R = R$$

$$\mathcal{E} = I_1 Z_1 + I_1 Z_2$$

$$I_1 Z_1 = I_2 Z$$

$$I_1 Z_2 = I_2 Z_2$$

$$\Rightarrow Z_1 Z_2 = Z Z_2$$

$$Z_1 = R_1 \qquad Z = R + i\omega L$$

$$Z_2 = R_2 \qquad Z_2 = \frac{R_2 \frac{1}{i\omega C_2}}{R_2 + \frac{1}{i\omega C_2}} = \frac{R_2}{1 + i\omega C_2 R_2}$$

$$R_1 R_2 = (R + i\omega L)\left(\frac{R_2}{1 + i\omega C_2 R_2}\right) = (R + i\omega L)\left(\frac{R_2 - i R_2^2 \omega C_2}{1 + \omega^2 C_2^2 R_2^2}\right) =$$

$$= \frac{R R_2 + \omega^2 C_2 L R_2^2}{1 + \omega^2 C_2^2 R_2^2} + i\,\frac{\omega L R_2 - R_2^2 R \omega C_2}{1 + \omega^2 C_2^2 R_2^2}$$

$$\frac{\omega L R_2 - R_2^2 R \omega C_2}{1 + \omega^2 C_2^2 R_2^2} = 0 \qquad \frac{R R_2 + \omega^2 C_2 L R_2^2}{1 + \omega^2 C_2^2 R_2^2} = R_1 R_2$$

$$L = R_2 R C_2 \qquad R R_2 + \omega^2 C_2 L R_2^2 = R_1 R_2 + \omega^2 C_2^2 R_1 R_2 C_2^2 R_2$$

$$R R_2 + \omega^2 C_2^2 R R_2^3 = R_1 R_2 + \omega^2 C_2^2 R_1 R_2 C_2^2 R_2^2$$

dla każdego ω, więc $\quad R R_2^3 C_2^2 = C_2^2 R_1 R_2 C_2^2 R_2^2$

$$R R_2 = R_1 R_2$$

$$R_2 = \frac{R_1 R_2}{R}$$