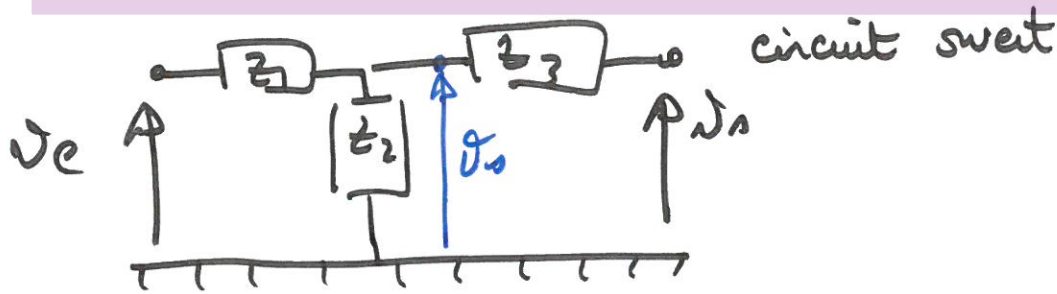
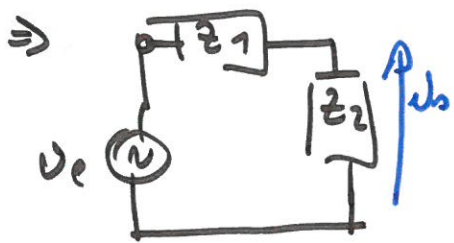


Exo 6: RLC fct de transfert $\frac{V_0}{V_e}$



19/ $\frac{J_0}{V_e}$ J_0 mesurée à vide cad en circuit ouvert
cad ps de courant de z_3



$$J_0 = \frac{V_e / z_1}{1/z_1 + 1/z_2} = \frac{V_e z_2}{z_2 + z_1}$$

$$\Rightarrow \frac{J_0}{V_e} = \frac{z_2}{z_1 + z_2}$$

20/ $z_1 = C \parallel L$ et $z_2 = R$ $K(\omega) = \frac{\omega R}{1 - LC\omega^2}$

$$\frac{1}{z_1} = j\omega C + \frac{1}{j\omega L} = \frac{1 - LC\omega^2}{j\omega L}$$

$$z_1 = \frac{j\omega L}{1 - LC\omega^2} = jK(\omega)$$

$$39/ \frac{J_0}{V_e} = \frac{R}{R + jK(\omega)} \Rightarrow \left| \frac{J_0}{V_e} \right| = \frac{R}{\sqrt{R^2 + K^2(\omega)}} \quad K^2 = \frac{L^2 \omega^2}{(1 - LC\omega^2)^2}$$

$\omega \rightarrow 0$ $K(\omega) \rightarrow 0$ $\left| \frac{J_0}{V_e} \right| \rightarrow 1$ BF

$\omega \rightarrow \infty$ $K(\omega) \rightarrow \infty$ $\left| \frac{J_0}{V_e} \right| \rightarrow 0$ HF

$\omega \rightarrow \omega_0$ $K(\omega \rightarrow \omega_0) \rightarrow \infty$ $\left| \frac{J_0}{V_e} \right| \rightarrow 0$

filtre rejetant passif de ω_0