

$$k \rightarrow \frac{j\omega/\omega_0}{1 + j\omega/\omega_0}$$

$$\approx 1 + j\frac{\omega}{\omega_0}$$

$$T_1 = \frac{(-1)}{1 + j\omega R_2 C_1}$$

$$T_2 = \frac{j\omega}{\omega_{01}}$$

$$\frac{1}{R_2 C_1}$$

$$10^4 \cdot 10^{-7} = 10^{-3}$$

$$\omega_{01} = 10^3 \text{ rad/s}$$

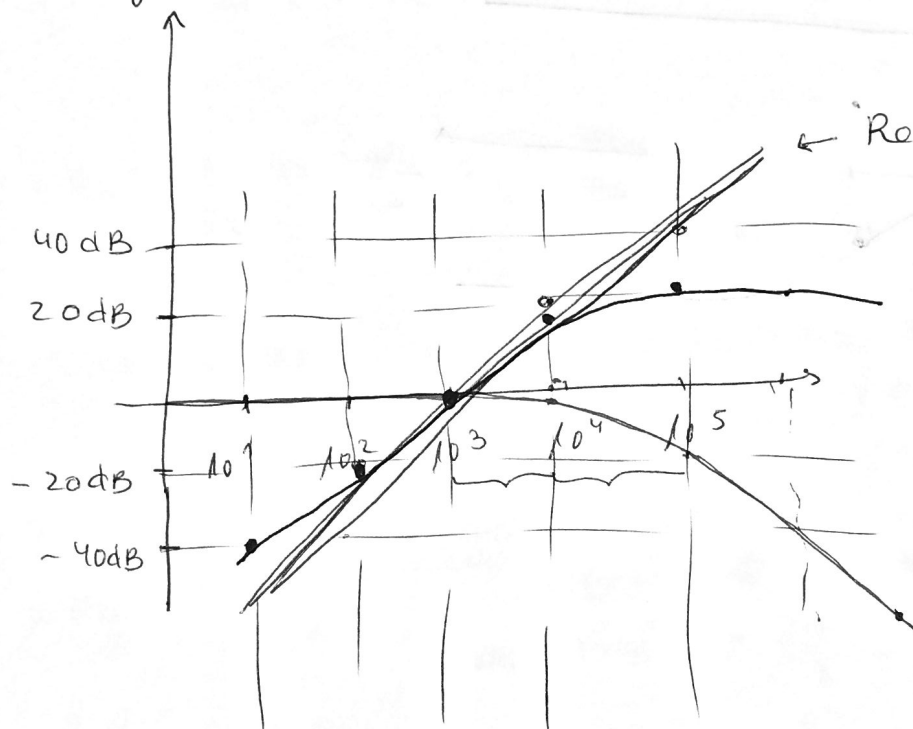
$$T_3 = \frac{1}{1 + j\omega R_1 C_1}$$

$$1 + j\frac{\omega}{\omega_{02}}$$

$$\frac{1}{R_1 C_1}$$

$$\omega_{02} = 10^4 \text{ rad/s}$$

$$20 \log |T(\omega)|$$



$$\omega < \omega_{01} \Rightarrow |V_o| < |V_i|$$

$$\omega > \omega_{01} \Rightarrow |V_o| > |V_i|$$

$$\frac{|V_o|}{|V_i|} = c_{tr}$$

$$\omega < \omega_0 \Rightarrow$$

$$\omega > \omega_0 \Rightarrow$$

$$\approx \frac{1}{\frac{\omega}{\omega_0}} = \frac{\omega_0}{\omega} \Rightarrow 20 \log \omega_0 - 20 \log \omega$$

$$\frac{1}{\sqrt{1 + \left(\frac{\omega}{\omega_0}\right)^2}}$$

$$(-1) \quad j \frac{\omega}{\omega_{01}} \quad \frac{1}{1 + j \frac{\omega}{\omega_{02}}}$$

$$\pi$$

$$\frac{\pi}{2}$$

$$0 - \arctan\left(\frac{\omega}{\omega_{02}}\right)$$

$$\begin{aligned} \omega \ll \omega_{02} &\rightarrow 0 \\ \omega = \omega_{02} &\Rightarrow \frac{\pi}{4} \\ \omega \gg \omega_{02} &\rightarrow \frac{\pi}{2} \end{aligned}$$

