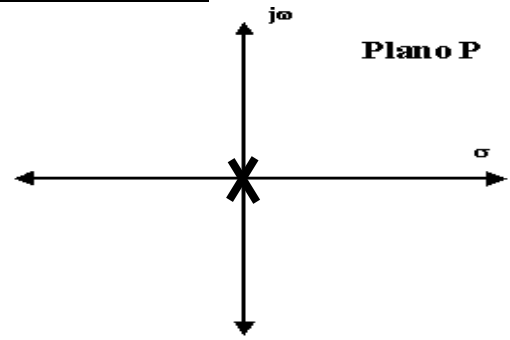


POLO AL ORIGEN

$$F(P) = \frac{1}{P} \rightarrow F(j\omega) = \frac{1}{j\omega}$$



MÓDULO $|M| = 20 \text{ Log } (1 / \omega)$

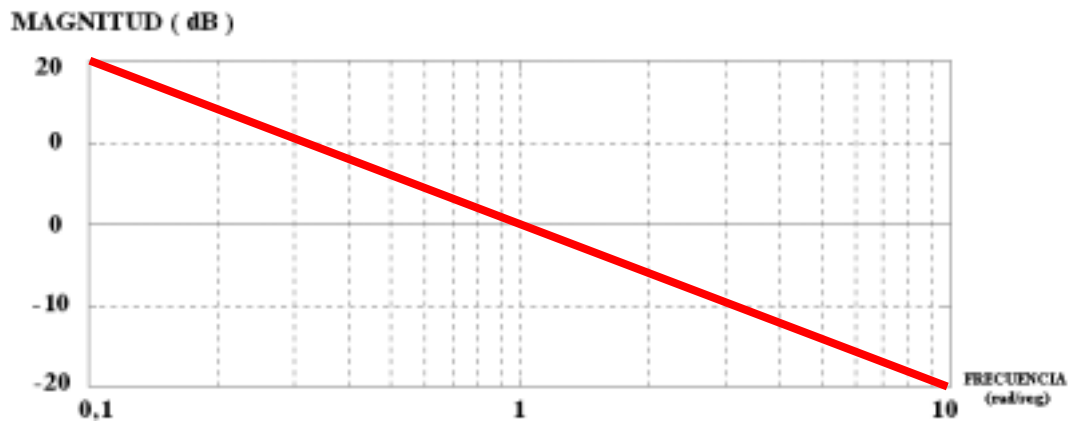
$$\omega = 100 \rightarrow |M| = -20 \text{ Log } (100) = -40 \text{ dB}$$

$$\omega = 10 \rightarrow |M| = -20 \text{ Log } (10) = -20 \text{ dB}$$

$$\omega = 1 \rightarrow |M| = 20 \text{ Log } (1) = 0 \text{ dB}$$

$$\omega = 0.1 \rightarrow |M| = -20 \text{ Log } (0.1) = +20 \text{ dB}$$

$$\omega = 0.01 \rightarrow |M| = -20 \text{ Log } (0.01) = +40 \text{ dB}$$



FASE $\varphi = \text{tg}^{-1} \text{ Im } / \text{ Re } = \text{tg}^{-1} (1/j\omega) / 0$

$$\omega = 100 \rightarrow \varphi = -\text{tg}^{-1} 0.01/0 = -90^\circ$$

$$\omega = 10 \rightarrow \varphi = -\text{tg}^{-1} 0.1/0 = -90^\circ$$

$$\omega = 1 \rightarrow \varphi = -\text{tg}^{-1} 1/0 = -90^\circ$$

$$\omega = 0.1 \rightarrow \varphi = -\text{tg}^{-1} 10/0 = -90^\circ$$

$$\omega = 0.01 \rightarrow \varphi = -\text{tg}^{-1} 100/0 = -90^\circ$$

