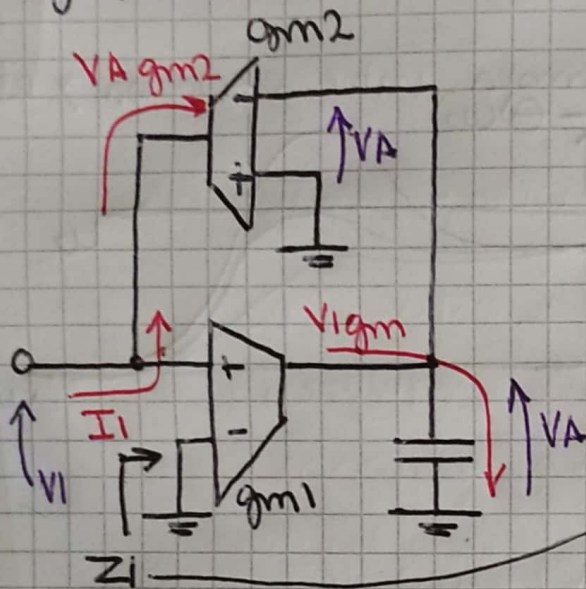


Example #2



$$V_A = V_1 g_{m1} \frac{1}{sC} \rightarrow \frac{V_A}{V_1} = \frac{g_{m1}}{sC}$$

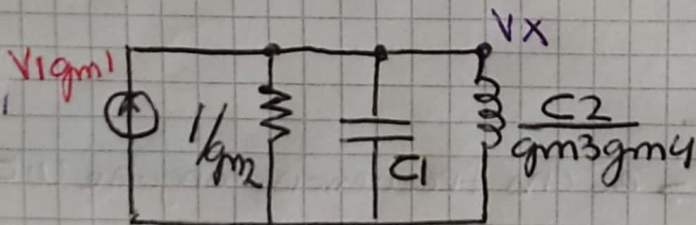
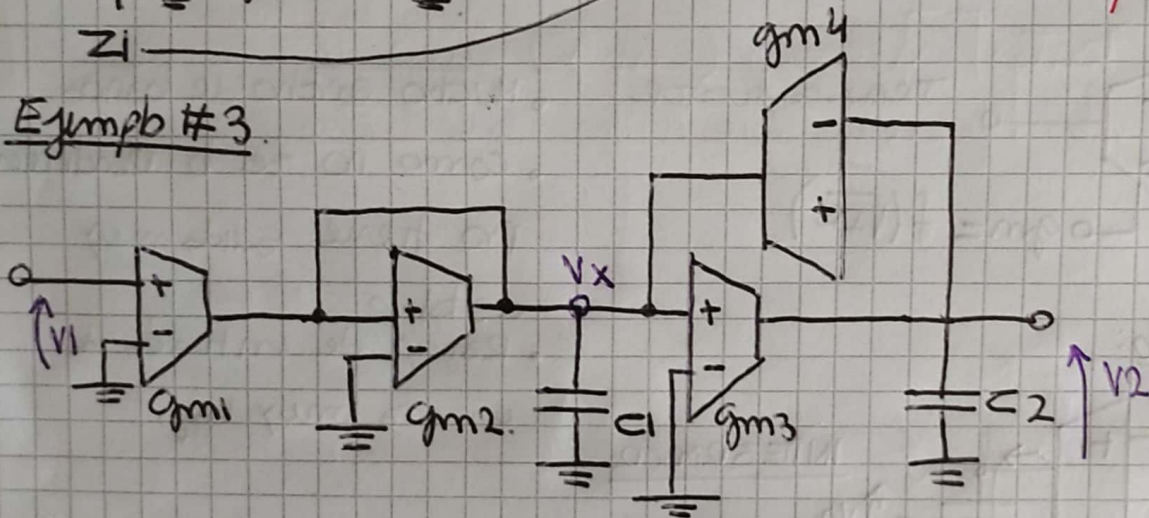
$$I_1 = V_A g_{m2}$$

$$\Rightarrow I_1 = V_1 g_{m1} \frac{1}{sC} g_{m2}$$

$$Z_1 = \frac{V_1}{I_1} = s \frac{C}{g_{m1} g_{m2}} \quad \text{CIRCUITO GIRADOR}$$

Leq

Example #3



$$V_x = V_1 g_{m1} \frac{1}{g_{m2} + sC_1 + \frac{g_{m3} g_{m4}}{sC_2}}$$

$$V_2 = \frac{sC_2}{g_{m3}} V_x = V_1 g_{m1} \frac{sC_2}{s^2 C_1 C_2 + sC_2 g_{m2} + g_{m3} g_{m4}}$$

$$\frac{V_2}{V_1} = \frac{g_{m1} g_{m3}}{s^2 C_1 C_2 + sC_2 g_{m2} + g_{m3} g_{m4}}$$

$$T(s) = \frac{g_{m1} g_{m3}}{C_1 C_2} \cdot \frac{1}{s^2 + s \frac{g_{m2}}{C_1} + \frac{g_{m3} g_{m4}}{C_1 C_2}}$$

$$T(s) = \frac{g_{m1}}{g_{m4}} \cdot \frac{\frac{g_{m3} g_{m4}}{C_1 C_2} \omega_n^2}{s^2 + s \frac{g_{m2}}{C_1} + \frac{g_{m3} g_{m4}}{C_1 C_2}}$$

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BAJOS

$$\omega_n = \sqrt{\frac{g_{m3} g_{m4}}{C_1 C_2}}$$

$$Q = \frac{C_1}{g_{m2}} \omega_n = \sqrt{\frac{C_1}{C_2} \frac{g_{m3} g_{m4}}{g_{m2}^2}}$$

$$|H(0)| = \frac{g_{m1}}{g_{m4}}$$