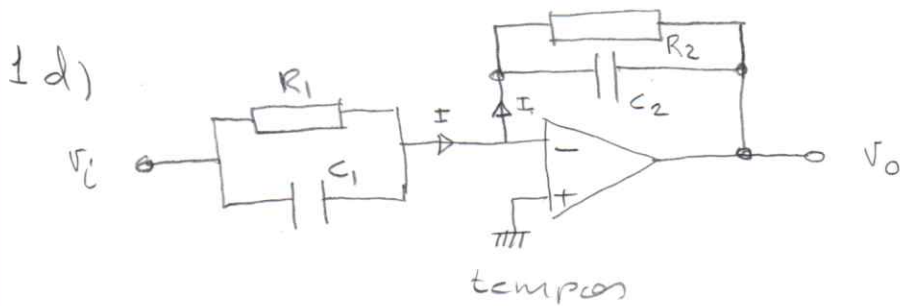


Modelação de Sistema



$$\frac{V_i}{R_1} + C_1 \frac{dV_i}{dt} = -\frac{V_o}{R_2} - C_2 \frac{dV_o}{dt}$$

corrente num condensador

$$C \frac{dV(t)}{dt}$$

Frequências $s = \sigma + j\omega$

$$\frac{V(s)}{R_1} + C_1 s V(s) = -\frac{V_o(s)}{R_2} - C_2 s V_o(s)$$

$$\left(\frac{1}{R_1} + C_1 s\right) V(s) = -V_o(s) \left(\frac{1}{R_2} + C_2 s\right)$$

$$\begin{aligned} \frac{V_o(s)}{V_i(s)} &= \frac{\frac{1}{R_1} + C_1 s}{\frac{1}{R_2} + C_2 s} = - \frac{\frac{R_2}{R_1} + R_2 C_1 s}{1 + R_2 C_2 s} \\ &= - \frac{\frac{R_2}{R_1} + R_2 \frac{R_1}{R_1} C_1 s}{1 + R_2 C_2 s} \\ &= - \frac{R_2}{R_1} \frac{1 + R_1 C_1 s}{1 + R_2 C_2 s} \end{aligned}$$