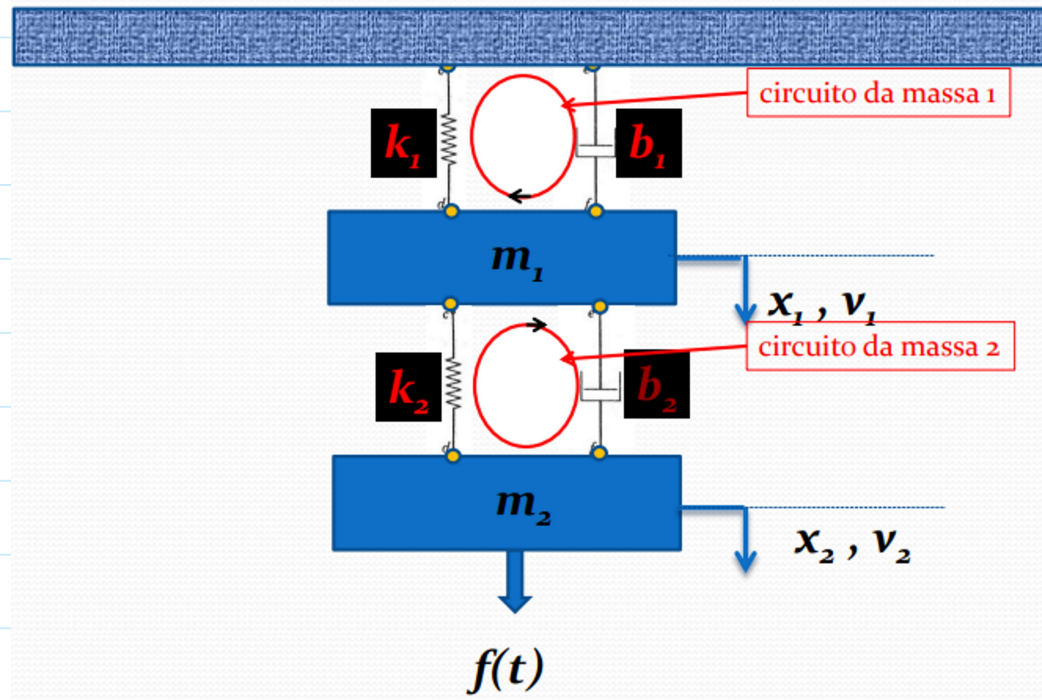


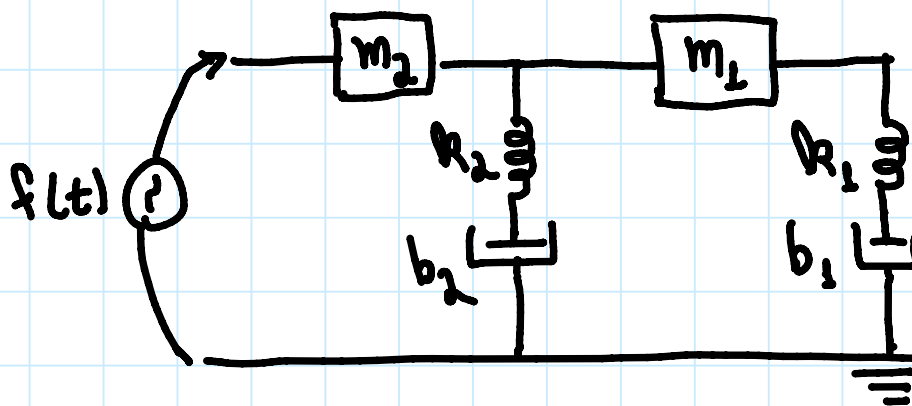
Nome: Gabriel Tetsuo Haga - 11260680

Slide analogia tipo 1

Ex.1)

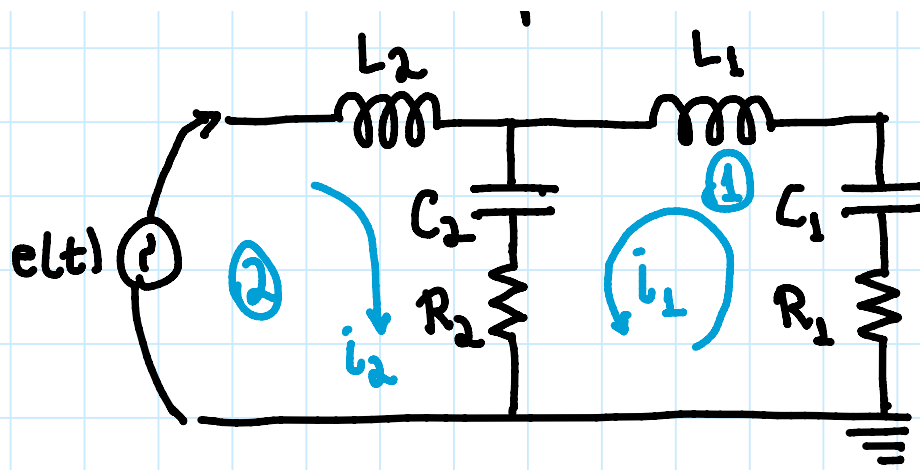


• Circuito mecânico:



• Circuito elétrico equivalente :





• Malha ①:

$$\left( L_1 D + R_1 + R_2 + \frac{1}{C_1 D} + \frac{1}{C_2 D} \right) i_1 - \left( R_2 + \frac{1}{C_2 D} \right) i_2 = 0$$

Analogia do tipo 1

$\Rightarrow$

$$m_1 \ddot{x}_1 + (b_1 + b_2) \dot{x}_1 + (k_1 + k_2) x_1 = b_2 \dot{x}_2 + k_2 x_2$$

• Malha ②:

$$\left( L_2 D + R_2 + \frac{1}{C_2 D} \right) i_2 - \left( R_2 + \frac{1}{C_2 D} \right) i_1 = e(t)$$

Analogia tipo 1

$\Rightarrow$

$$m_2 \ddot{x}_2 + b_2 \dot{x}_2 + k_2 x_2 = f(t) + b_2 \dot{x}_1 + k_2 x_1$$