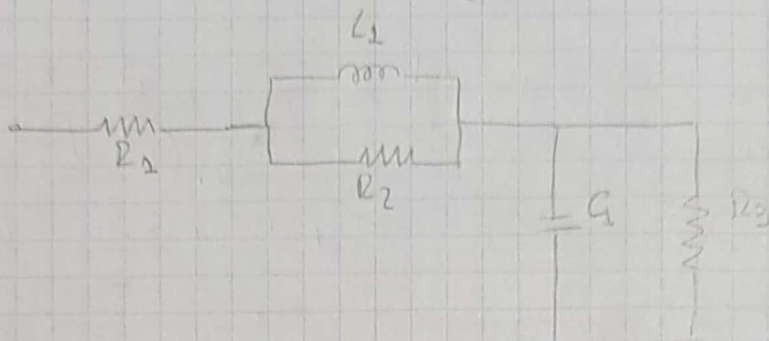


#4

$$Z(s) = \frac{s^2 + 10s + 24}{s^2 + 12s + 20}$$



$$Z(0) = R_1 + R_3$$

$$Z(\infty) = R_1 + R_2$$

• calculo residuos, el negativo es el tangue RL comp.

$$\lim_{s \rightarrow -10} \frac{(s+10)}{(s+10)(s+2)} \frac{(s^2 + 10s + 24)}{(s+10)(s+2)} = -\frac{24}{8}$$

$$\lim_{s \rightarrow -2} \frac{(s+2)}{(s+10)(s+2)} \frac{(s^2 + 10s + 24)}{(s+10)(s+2)} = \frac{4 - 20 + 24}{8} = 1$$

• valor de componentes RL

$$\lim_{s \rightarrow -10} \frac{(s+10)}{s} \frac{(s^2 + 10s + 24)}{(s+10)(s+2)} = \frac{3}{10}$$

$$Z_2(s) = \frac{s^2 + 10s + 24}{(s+10)(s+2)} - \frac{s \frac{3}{10}}{s+10}$$

$$Z_2(s) = \frac{s^2 + 10s + 24 - 0,3s^2 - 0,6s}{(s+10)(s+2)}$$

$$Z_2(s) = \frac{(s + 24/7)(s + 10)}{(s+2)(s+10)}$$

$$Z_3(s) = 0,7 \frac{(s + 24/7)}{(s+2)} - \frac{1}{s+2}$$

$$= \frac{0,7s + \frac{24}{10} - 1}{(s+2)} = \frac{0,7(s+2)}{(s+2)} = \frac{0,7}{1} = \frac{0,7}{2}$$

$$R_2 = 0,7$$

$$R_2 = 3/10 \quad R_3 = 1/2$$

$$C_1 = 1$$

$$L_1 = 3/100$$