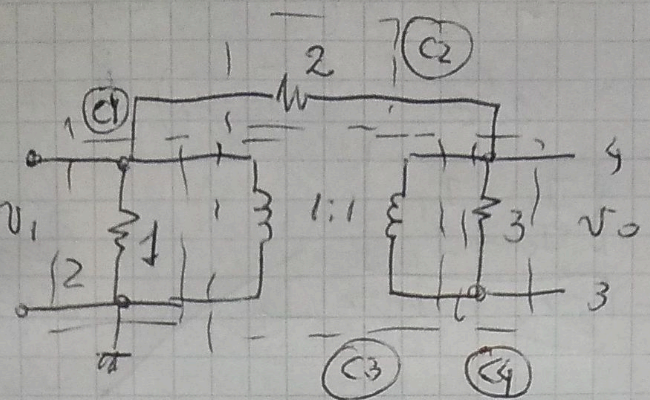
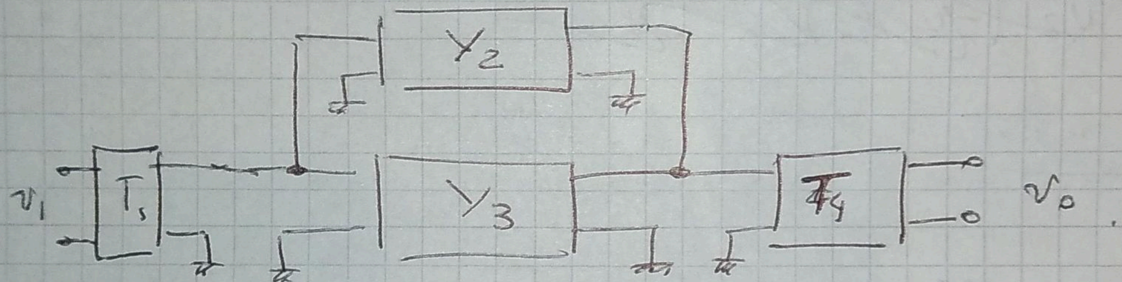
FECHA

1



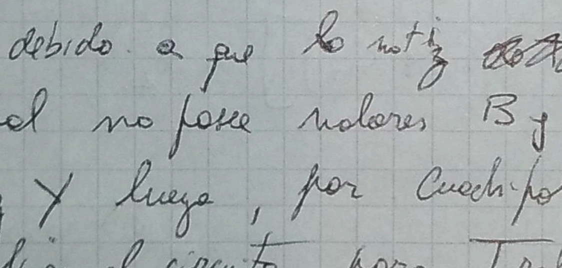
Suponemos punto 3 a GND

Usando interconexión de cuadripolos:



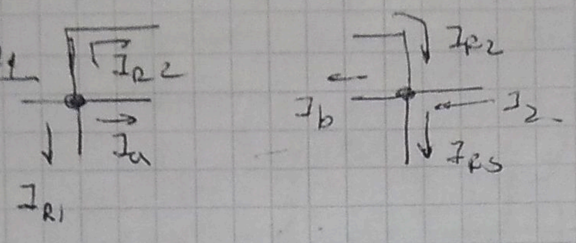
$$\left\{ \{Z_1\}_T \cdot \{(Y_2+Y_3)\}_T \cdot \{Z_4|_{T0}\right\}_Z = Z_T$$

Pero debido a que la matriz ~~[illegible]~~ de Transferencia del Trafo ideal no posee valores B y C, no podemos obtener la matriz Y luego, por Cuadripolos no es posible ~~[illegible]~~ analizar el circuito para Trafo ideal. Debemos usar nodos.



~~[illegible]~~ $V_1 = -V_2$ y $I_a = I_b$ por $a=1$

NOTA



de aquí :

$$\begin{cases} I_2 + (V_2 - V_1)G_2 = I_b + V_2 G_3 \\ I_1 + (V_1 - V_2) G_2 = I_a + V_1 G_1 \end{cases}$$

$$\Downarrow$$

$$\begin{cases} I_1 = V_1 G_1 + (V_1 - V_2) G_2 + I_b \\ I_2 = V_2 G_3 + (V_2 - V_1) G_2 + I_b \end{cases}$$

Restamos m. a m.:

$$I_1 - I_2 = V_1 G_1 - V_2 G_3 + (V_2 - V_1) G_2 + (V_1 - V_2) G_2$$

$$V_2 = -V_1 \Rightarrow$$

$$I_1 - I_2 = V_1 G_1 + V_1 G_3$$

$$\begin{cases} V_1 = \frac{I_1}{(G_1 + G_3)} - \frac{I_2}{(G_1 + G_3)} \\ V_2 = -V_1 \Rightarrow V_2 = \frac{I_2}{(G_1 + G_3)} - \frac{I_1}{(G_1 + G_3)} \end{cases}$$

$$Z_T = \begin{pmatrix} \frac{1}{(G_1 + G_3)} & -\frac{1}{(G_1 + G_3)} \\ -\frac{1}{(G_1 + G_3)} & \frac{1}{(G_1 + G_3)} \end{pmatrix}$$

$$Z_{11} = Z_{12} = Z_{21} = Z_{22} = \frac{1}{\frac{1}{1} + \frac{1}{3}} \Rightarrow \boxed{Z_{11} = Z_{12} = Z_{21} = Z_{22} = \frac{3}{4}}$$