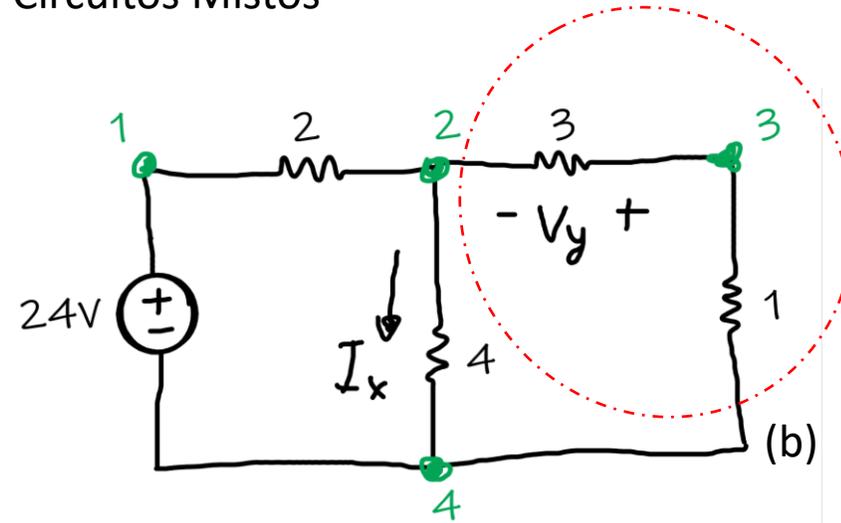
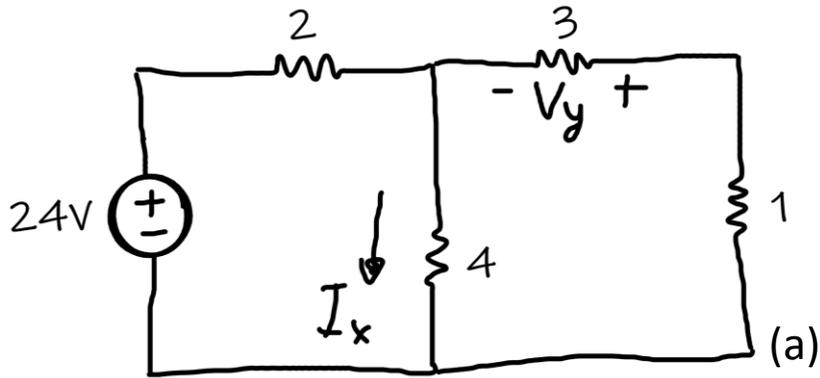


CIRCUITOS MISTOS

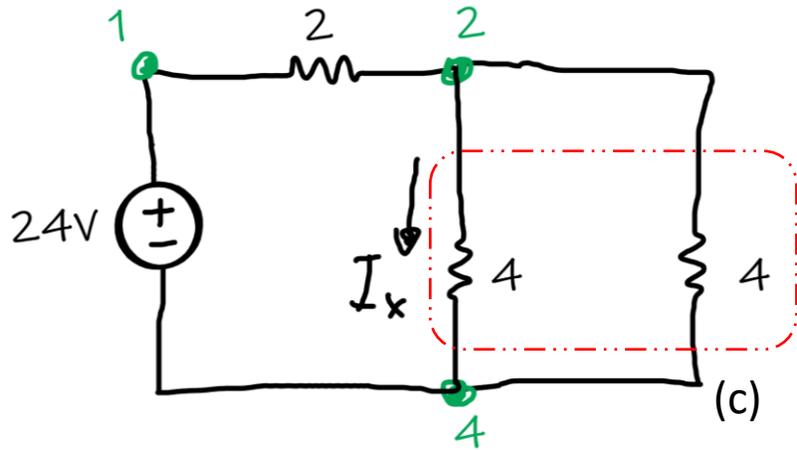
Circuitos Mistos

- Dado o circuito 2.5 - IRWIN:



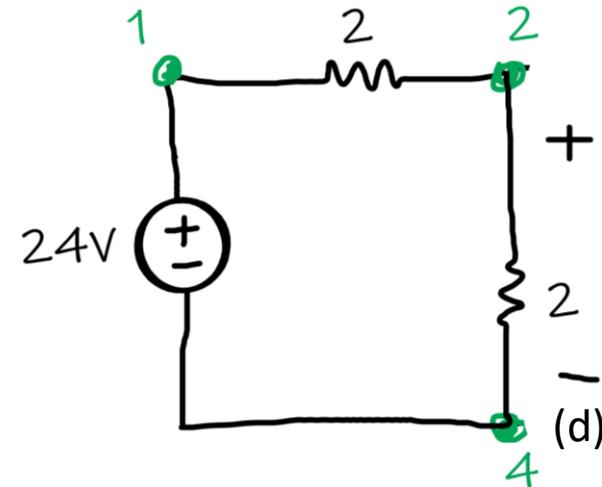
Associação
Série de
Resistores

$$R_{eq1} = 3 + 1 = 4\Omega$$



Associação
Paralela de
Resistores

$$R_{eq2} = \frac{4 \times 4}{4 + 4} = 2\Omega$$



Divisor de
Tensão

$$V_x = \frac{2}{2 + 2} \times 24 = 12V$$

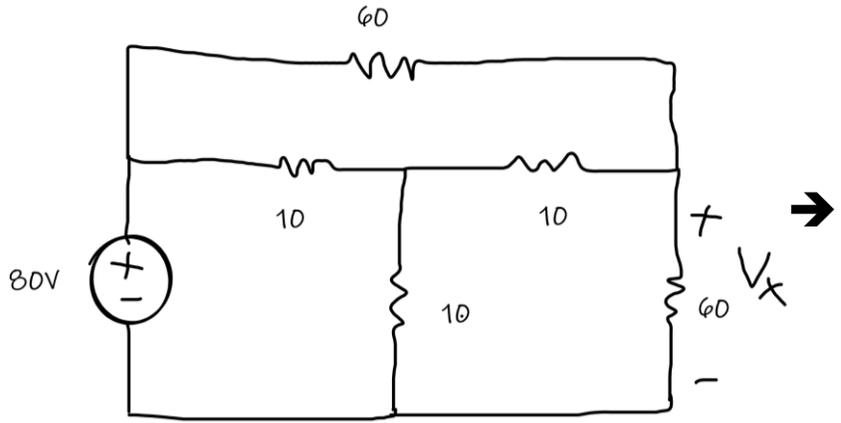
Sendo V_x a tensão entre os **NÓS 2 e 4**, então, no circuito (c) se pode escrever:

$$I_x = \frac{V_x}{4} = \frac{12}{4} = 3A$$

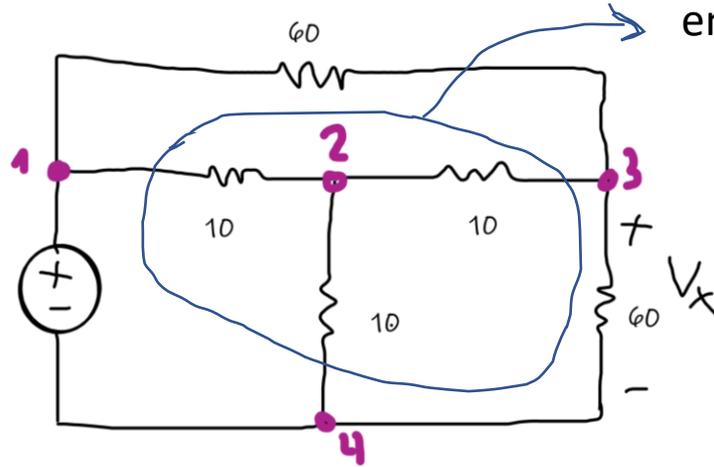
Sendo V_x a tensão entre os **NÓS 2 e 4**, então, no circuito (b) se pode escrever:

$$V_y = -\frac{3}{1 + 3} \times V_x \Rightarrow V_y = -\frac{3}{1 + 3} \times 12 \Rightarrow V_y = -9V$$

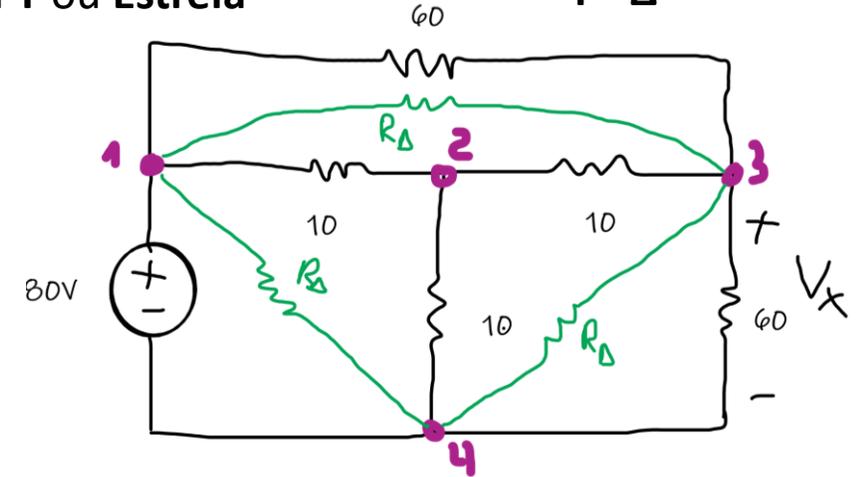
- Dado o circuito:



Identificando os NÓS



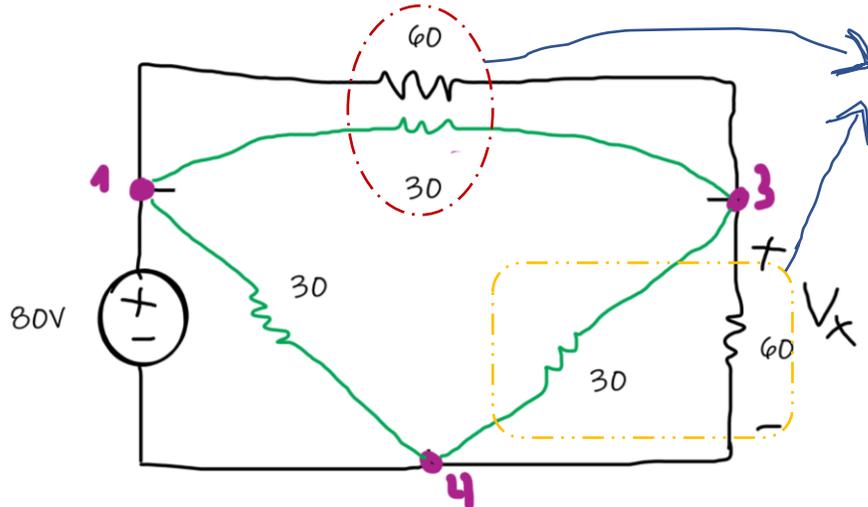
Identificando uma Associação em Y ou Estrela



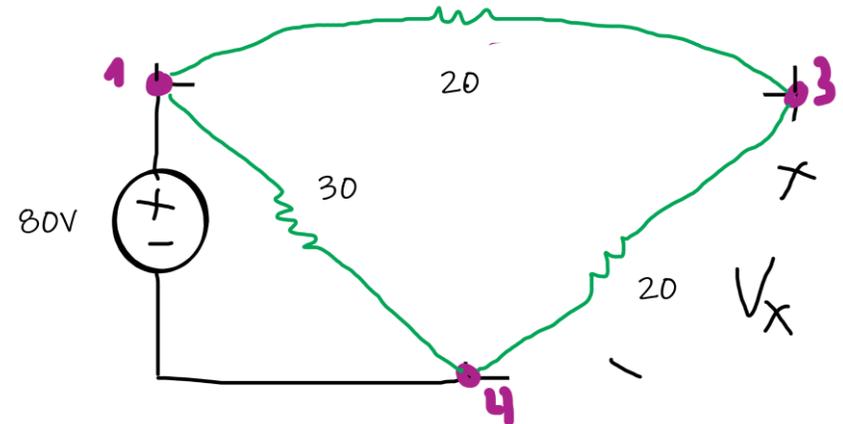
Utilizando Transformação Y - Δ

Sendo os 3 resistores de mesmo valor, então:

$$R_{\Delta} = 3 \times R_Y \Rightarrow R_{\Delta} = 3 \times 10 = 30\Omega$$



$$R_{eq} = \frac{30 \times 60}{30 + 60} = 20\Omega$$



$$V_X = \frac{20}{20 + 30} \times 80 \Rightarrow V_X = 40V$$