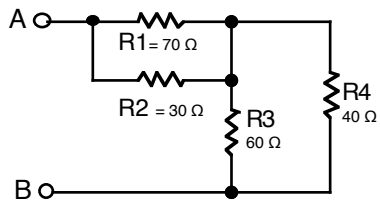
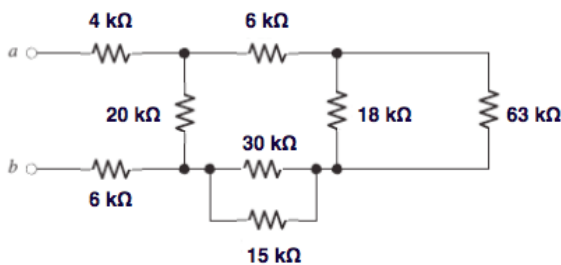


Elementos de Análise de Circuitos: exercícios

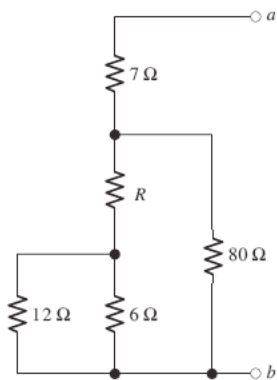
1. - Calcule a resistência equivalente entre os pontos A e B.



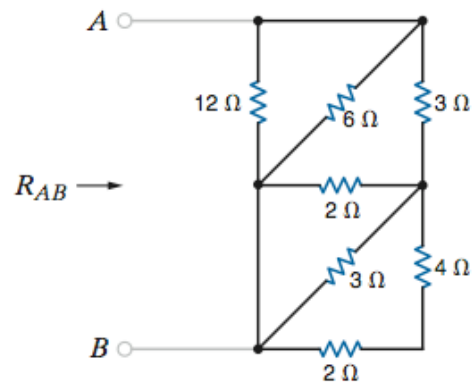
2. - Calcule a resistência equivalente entre os pontos a e b.



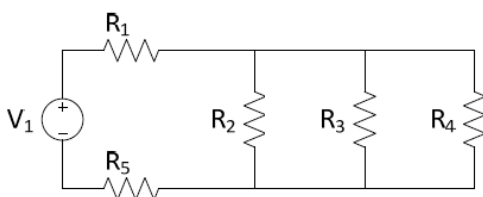
3. - $R_{ab} = 23 \Omega$. Calcule R .



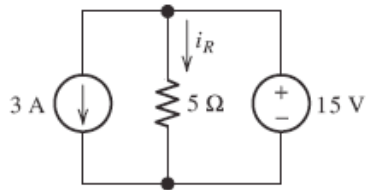
4. - Calcule R_{AB} .



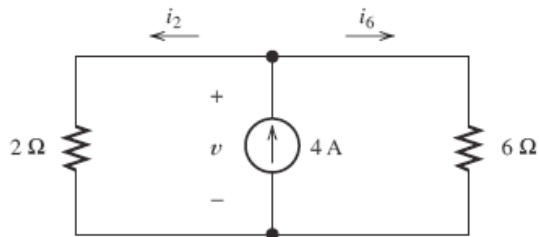
5. - Calcule a corrente que atravessa R_1 e a tensão aos terminais de R_2 .
 $V_1 = 8V$; $R_1 = 2\Omega$; $R_2 = R_3 = R_4 = 3\Omega$; $R_5 = 1\Omega$



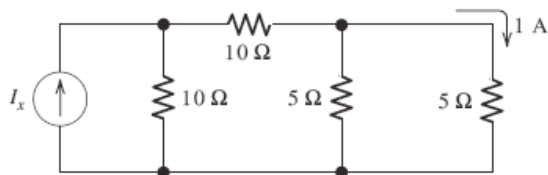
6. - Calcule i_R e a potência fornecida pela fonte de 15V.



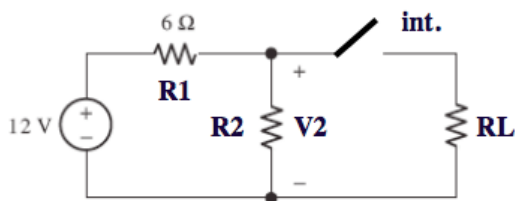
7. - Calcule as correntes.



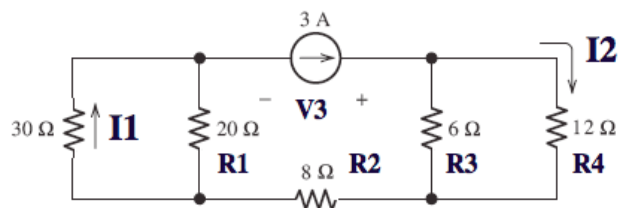
8. - Calcule I_x .



9. - Com o interruptor aberto $V_2=8V$ e com ele fechado $V_2=6V$. Calcule R_2 e R_L .

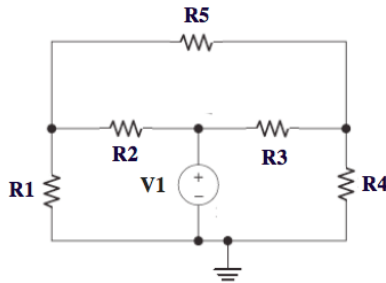


10.- Calcule I_1 , I_2 e V_3 .



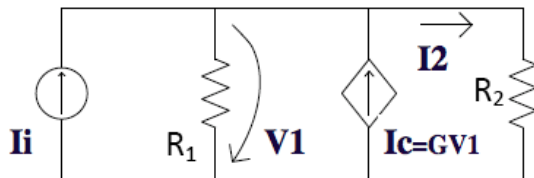
11.- $V_1=9V$; $R_1=R_4=2.2k\Omega$; $R_2=R_3=6.8k\Omega$; $R_5=4.7k\Omega$.

Calcule a queda de tensão em R_1 e a corrente que atravessa R_5 .



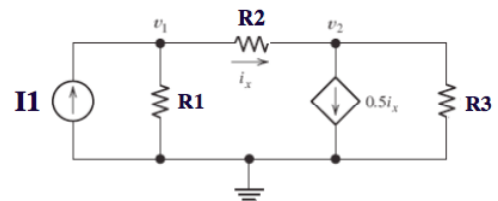
12.- Calcule I_2 e V_1 , sabendo que:

$R_1=3\Omega$; $R_2=5\Omega$; $I_i=2A$; $G=400mS$.



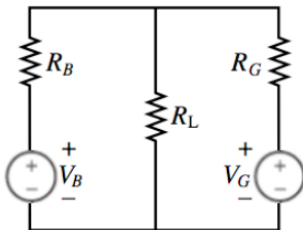
13.- $R_1=10k\Omega$; $R_2=5k\Omega$; $R_3=20k\Omega$

$I_1=1mA$. Calcule i_x .



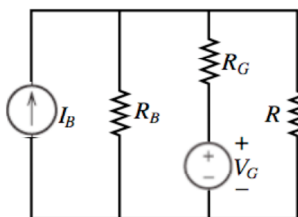
14.- Usando sobreposição, calcule a tensão e a potência em R_L , sabendo que:

$R_L=7.2\Omega$; $R_B=0.7\Omega$; $R_G=0.3\Omega$; $V_B=11V$; $V_G=12V$.

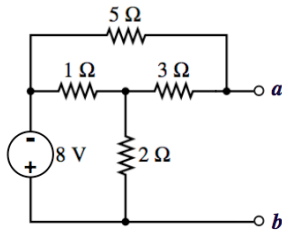


15.- Usando sobreposição, calcule a tensão em R , sabendo que:

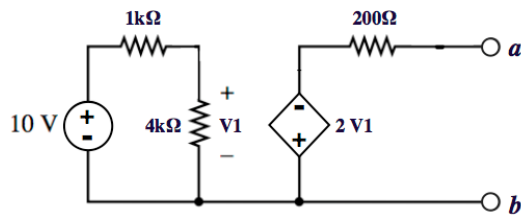
$R=0.23\Omega$; $R_B=1\Omega$; $R_G=0.3\Omega$; $I_B=12A$; $V_G=12V$.



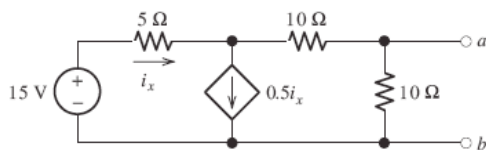
16.- Determine o equivalente de Norton.



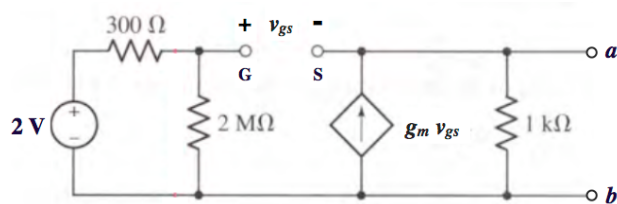
17.- Determine o equivalente de Norton.



18.- Determine o equivalente de Thévenin.



19.- Determine o equivalente de Thévenin. Considere $g_m = 19 \text{ mS}$.



20.- $V_1=3\text{V}$; $R_1=R_2=500\Omega$; $R_3=R_4=250\Omega$; $G=4\text{mS}$. Calcule V_2 , I_1 e I_4 .

Sugestão: use transformação de fontes (1 vez à esquerda e 2 à direita) para calcular V_2 .
Depois, com o circuito original, calcule as correntes.

