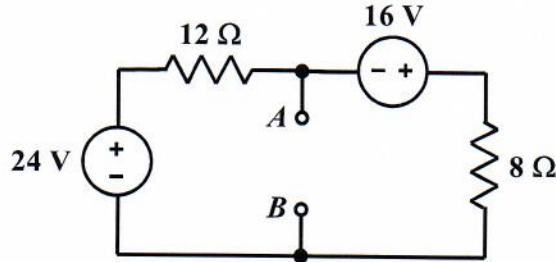
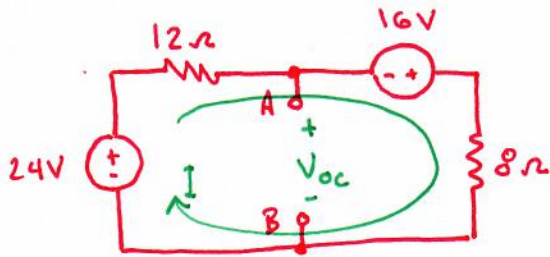


EE/EET 2240
Homework Problem 029



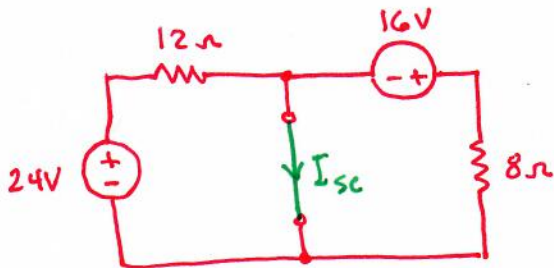
Determine and sketch the Thévenin equivalent circuit with respect to terminals *A* and *B*.



$$I = \frac{24V + 16V}{12\Omega + 8\Omega} = 2A$$

$$V_{oc} = -16V + (8\Omega)I = 0V$$

$$\text{or } V_{oc} = 24V - (12\Omega)I = 0V$$



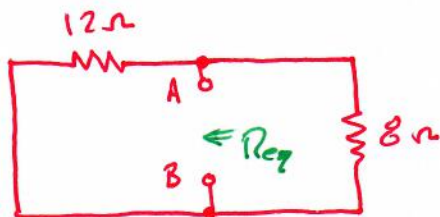
$$I_{sc} = \frac{24V}{12\Omega} - \frac{16V}{8\Omega} = 0A$$

$$V_T = V_{oc} = 0V$$

$$R_T = \frac{V_{oc}}{I_{sc}} = \frac{0}{0}$$

Can't be evaluated.

Use the R_{eq} approach:



$$R_{eq} = 12\Omega \parallel 8\Omega = 4.8\Omega$$

$$\therefore R_T = 4.8\Omega$$



or

