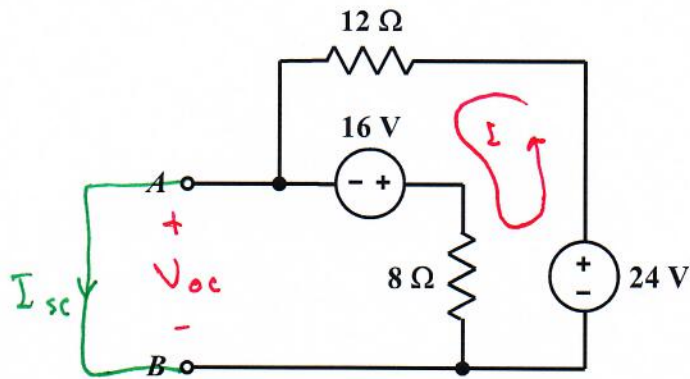


EE/EET 2240
Homework Problem #027



Find the Thévenin equivalent circuit with respect to terminals A and B .

$$(12\Omega)I - 16V + (8\Omega)I - 24V = 0$$

$$\Rightarrow I = \frac{40V}{20\Omega} = 2A$$

$$V_{oc} = -16V + 8I = 0V$$

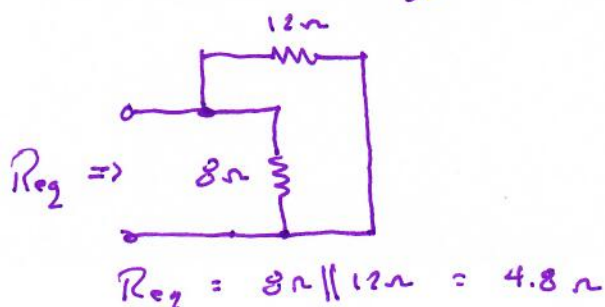
$$\underline{OR} \quad V_{oc} = -12I + 24V = 0V$$

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

$$\therefore V_T = 0V$$

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

Alternately,



$$\therefore R_T = 4.8\Omega$$

