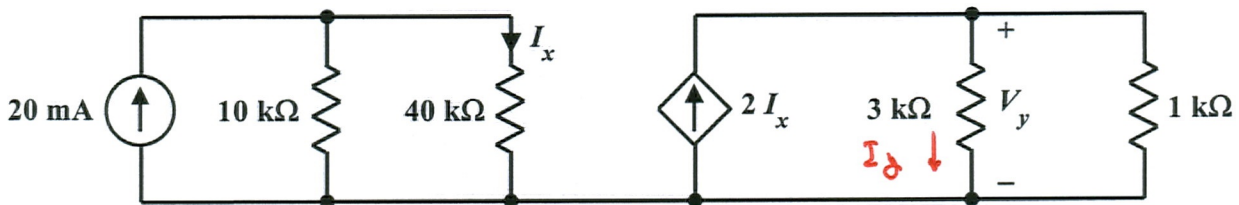


EE/EET 2240  
**Homework Problem #11**



(a) Determine the value of  $V_y$ .

$$I_x = \frac{10\text{k}\Omega}{10\text{k}\Omega + 40\text{k}\Omega} \cdot 20\text{mA} = 4\text{mA}$$

$$I_y = \frac{1\text{k}\Omega}{3\text{k}\Omega + 1\text{k}\Omega} \cdot 2I_x = 2\text{mA}$$

$$V_y = (3\text{k}\Omega) I_y = 6\text{V}$$

(b) Does the CCCS *absorb* or *deliver* power? How much?

The current ( $2I_x = 8\text{mA}$ ) and the voltage ( $V_y = 6\text{V}$ ) do not satisfy the PSC, so it delivers

$$(8\text{mA})(6\text{V}) = 48\text{mW}$$