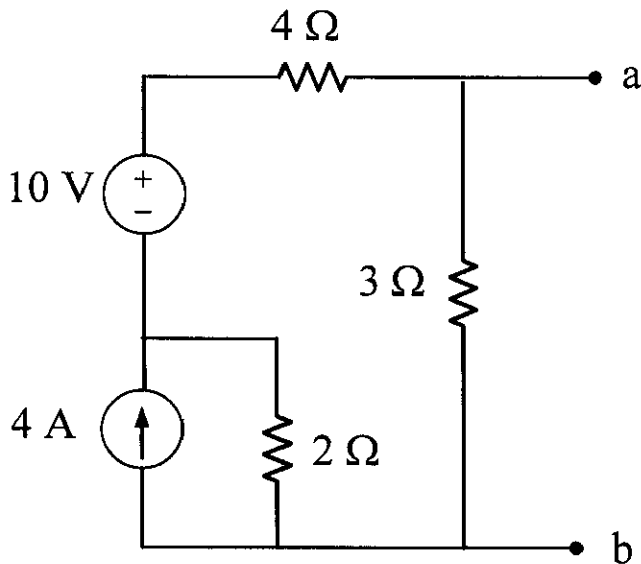


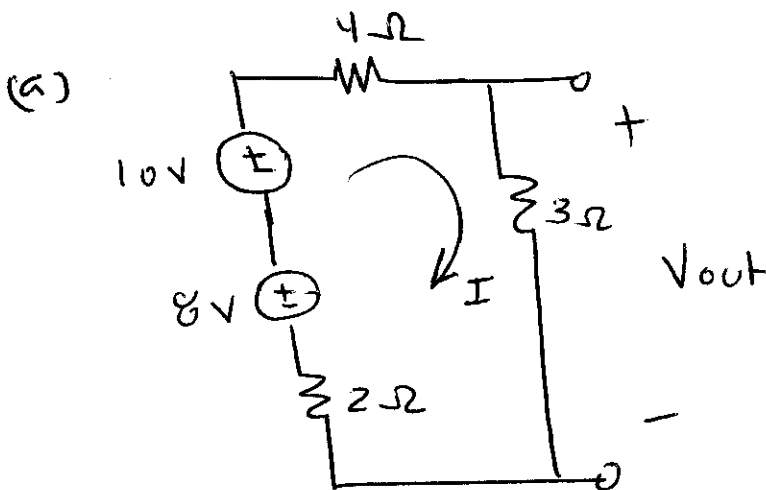
EE 201-01 – Fall 2011(111)  
Quiz 3

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For the circuit shown above find the followings :

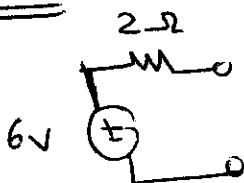
- The Thevenin Equivalent circuit between terminal a and b ?
- The maximum power to develop when a load is connected between a and b ?



$$\begin{aligned} \text{KVL} \\ -10 + 4I + 3I + 2I - 8 &= 0 \\ \Rightarrow 9I &= 18 \\ \Rightarrow I &= 2\text{ A} \\ V_{out} &= 3I = 3(2) = 6\text{ V} \end{aligned}$$

$$R_{th} = (4 + 2) \parallel 3 = 2\ \Omega$$

Thevenin



$$\begin{aligned} (b) \quad P_{max} &= \frac{V_{th}^2}{4R_{th}} = \frac{6^2}{4(2)} \\ &= 4.5\text{ W} \end{aligned}$$