EEE 31 Problem Set 2
Due: Jan 31, 2012 (5pm)

1. Use node-voltage method to calculate the power being dissipated by the 2-Ω resistor for the circuit in Fig. 1.

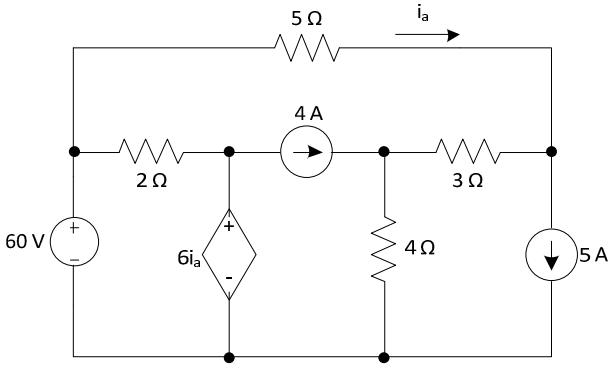

Fig. 1

2. Use mesh-current method to calculate the power being dissipated by the 2-Ω resistor for the circuit in Fig. 1.
3. Find the Thevenin and Norton equivalent with respect to the terminals a,b for the circuit shown in Fig. 2.

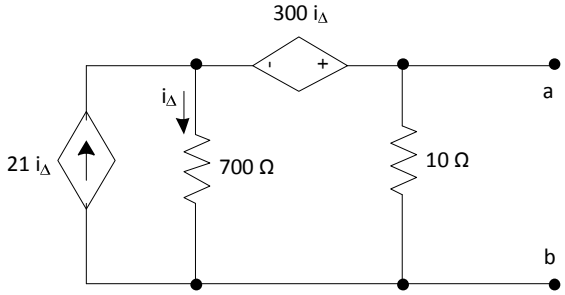

Fig. 2

4. For the given circuit in Fig. 3

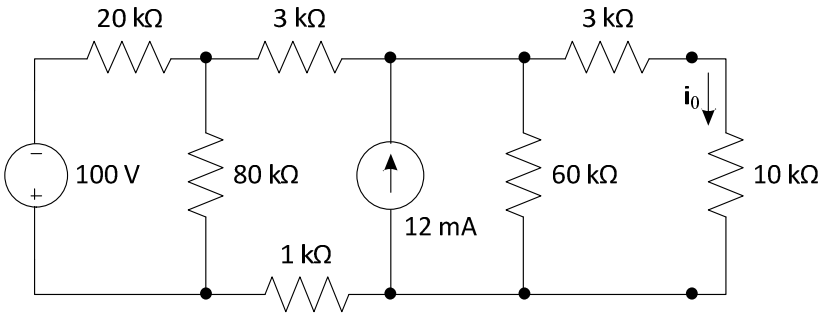

Fig. 3

a. Find the current in the 10 kΩ resistor by using successive source transformations.
b. Using the results in a), work back through the circuit to find the power developed in the 100 V source.