

Sirindhorn International Institute of Technology

Thammasat University at Rangsit

School of Information, Computer and Communication Technology

ECS 203: Problem Set 6

Semester/Year: 2/2015

Course Title: Basic Electrical Engineering

Instructor: Asst. Prof. Dr. Prapun Suksompong (prapun@siit.tu.ac.th)

Course Web Site: <http://www2.siiit.tu.ac.th/prapun/ecs203/>

Due date: Not Due

Questions

- 1) [Alexander and Sadiku, 2009, Q4.27] Apply **source transformation** to find v_x in the circuit of Figure 1.

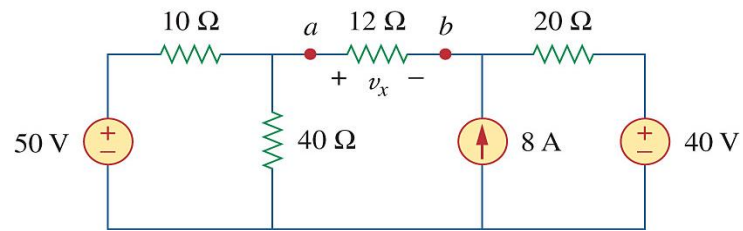


Figure 1

- 2) [Alexander and Sadiku, 2009, Q4.22] For the circuit in Figure 2, use **source transformation** to find i .

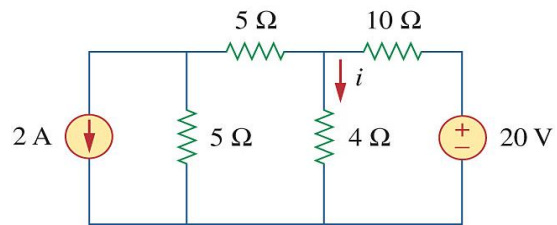


Figure 2

- 3) [Alexander and Sadiku, 2009, Q4.33] Determine R_{Th} and V_{Th} at terminals 1-2 of each of the circuits of Figure 3.

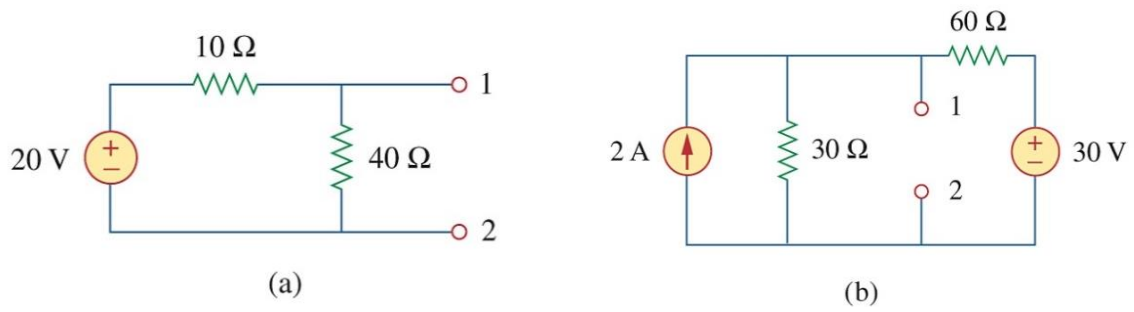


Figure 3

- 4) [Alexander and Sadiku, 2009, Q4.39] Obtain the Thevenin equivalent at terminals a-b of the circuit in Figure 4.

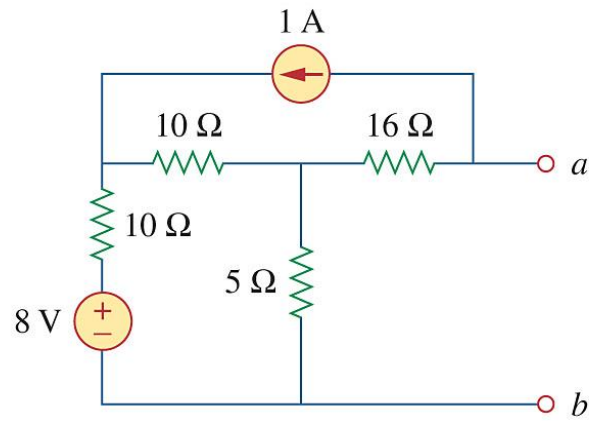


Figure 4

5) [Alexander and Sadiku, 2009, Q4.45] Find the Norton equivalent of the circuit in Figure 5.

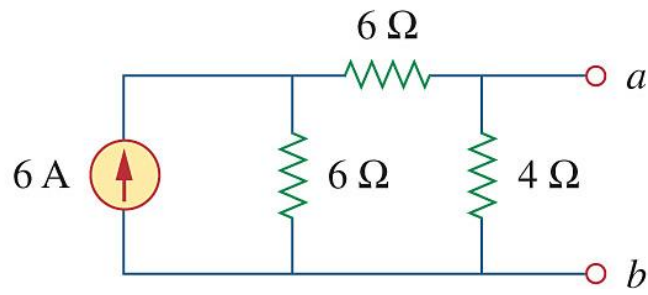


Figure 5

- 6) [Alexander and Sadiku, 2009, Q4.56] Use Norton's theorem to find V_o in the circuit of Figure 6.

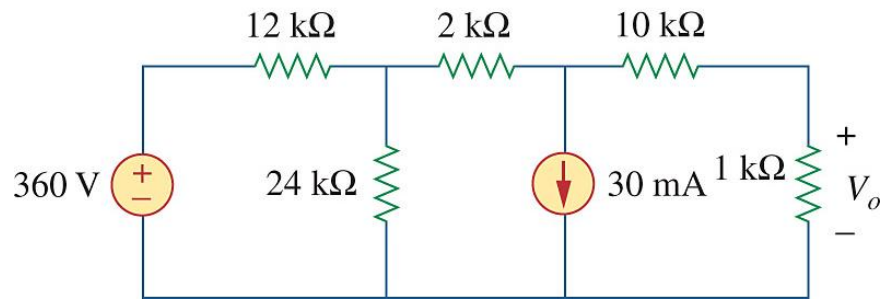


Figure 6

- 7) [Alexander and Sadiku, 2009, Q4.66] Find the maximum power that can be delivered to the resistor R in the circuit of Figure 7.

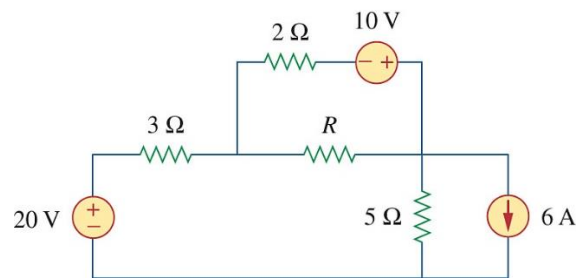


Figure 7