HW4: **Name:**_____

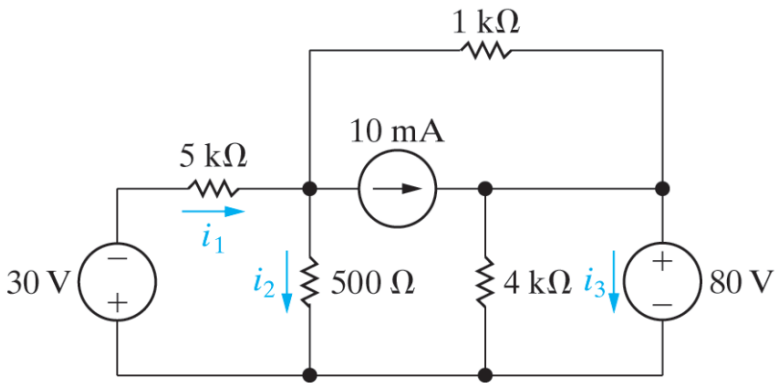
Lab Section:_____

4.23 PSPICE MULTISIM

a. Use the node-voltage method to find the branch currents i_1, i_2, and i_3 in the circuit in Fig. P4.23.

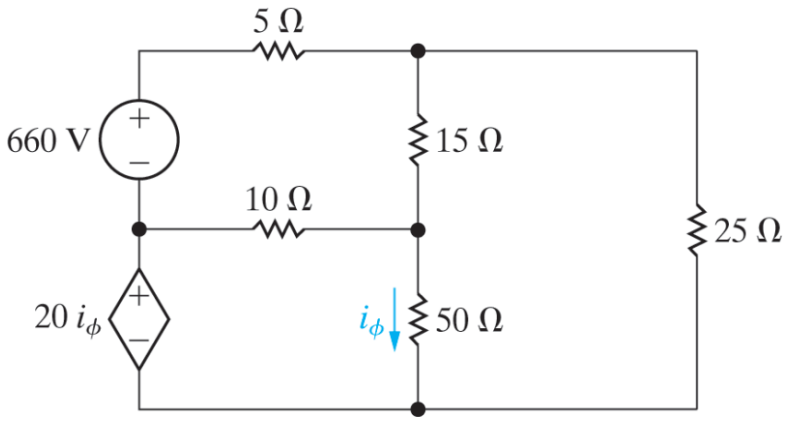
b. Check your solution for i_1, i_2, and i_3 by showing that the power dissipated in the circuit equals the power developed.

Figure P4.23



4.41 PSPICE / MULTISIM Use the mesh-current method to find the power delivered by the dependent voltage source in the circuit seen in Fig. P4.41.

Figure P4.41

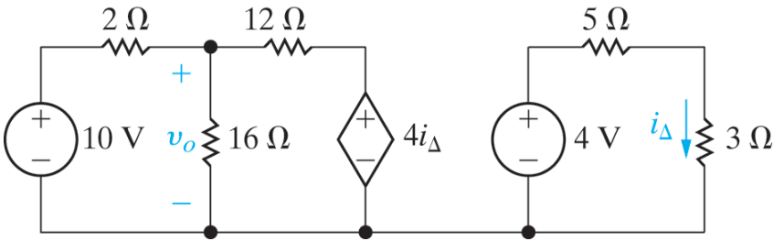


4.42 PSPICE MULTISIM

a. Use the mesh-current method to find v_o in the circuit in Fig. P4.42.

b. Find the power delivered by the dependent source.

Figure P4.42

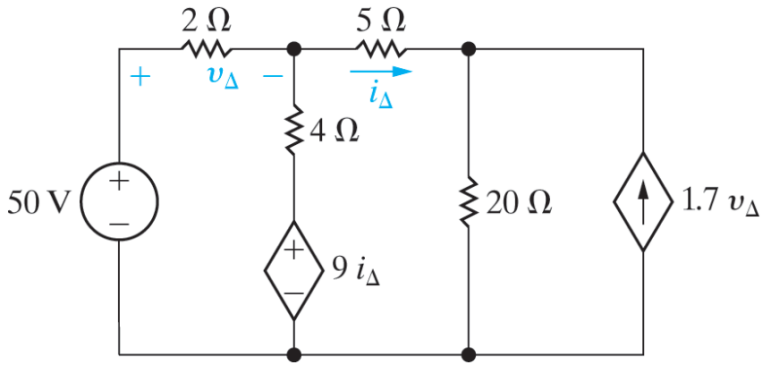


4.47 PSPICE / MULTISIM

a. Use the mesh-current method to determine which sources in the circuit in Fig. P4.47 are generating power.

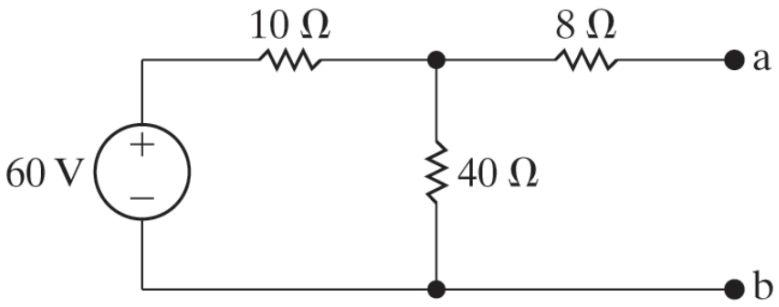
b. Find the total power dissipated in the circuit.

Figure P4.47



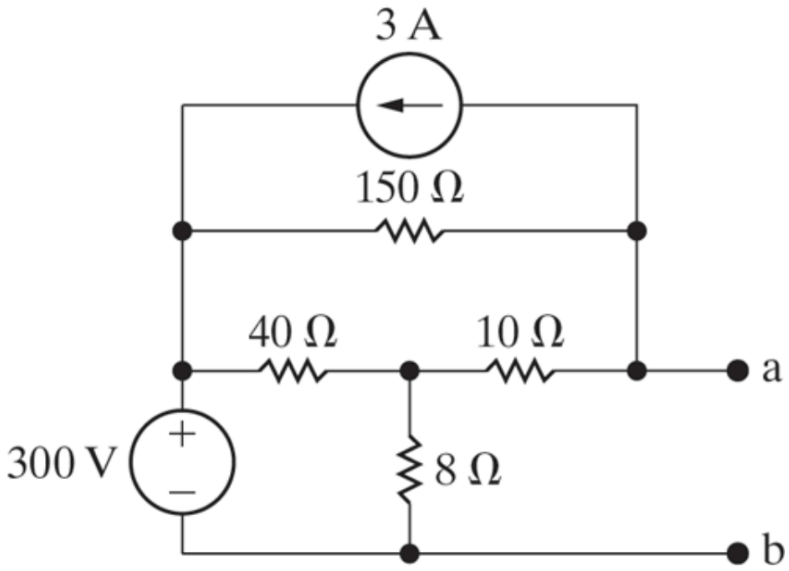
4.64 PSPICE / MULTISIM Find the Thévenin equivalent with respect to the terminals a, b for the circuit in Fig. P4.64.

Figure P4.64



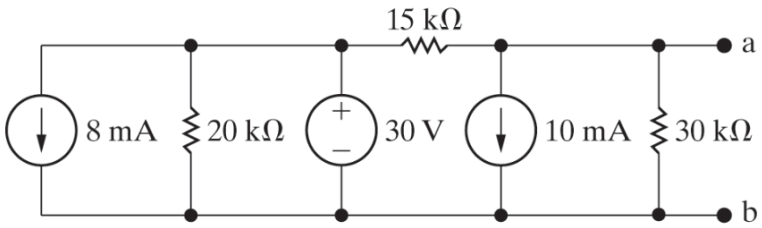
4.67 PSPICE / MULTISIM Find the Thévenin equivalent with respect to the terminals a, b for the circuit in Fig. P4.67.

Figure P4.67



4.68 PSPICE / MULTISIM Find the Norton equivalent with respect to the terminals a, b in the circuit in Fig. P4.68.

Figure P4.68



4.82 PSPICE / MULTISIM The variable resistor in the circuit in Fig. P4.82 is adjusted for maximum power transfer to R_o.

a. Find the value of R_o.

b. Find the maximum power that can be delivered to R_o.

c. Find a resistor in Appendix H closest to the value in part (a). How much power is delivered to this resistor?

Figure P4.82