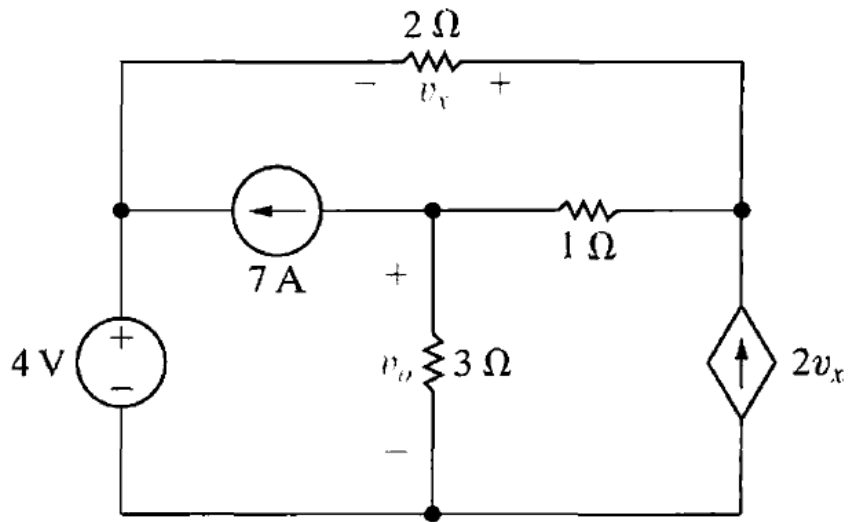


ENEE231 CH4 Homework Problems

4.25 Use the node-voltage method to find the value of v_o in the circuit in Fig. P4.25.

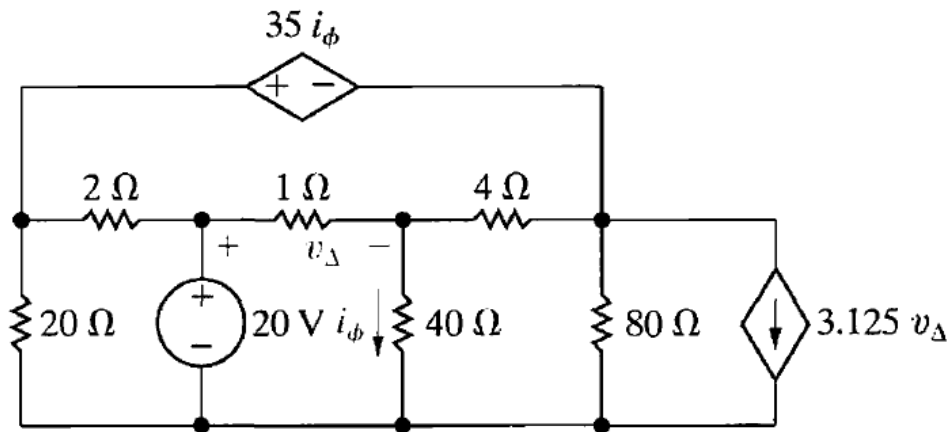
PSPICE
MULTISIM

Figure P4.25



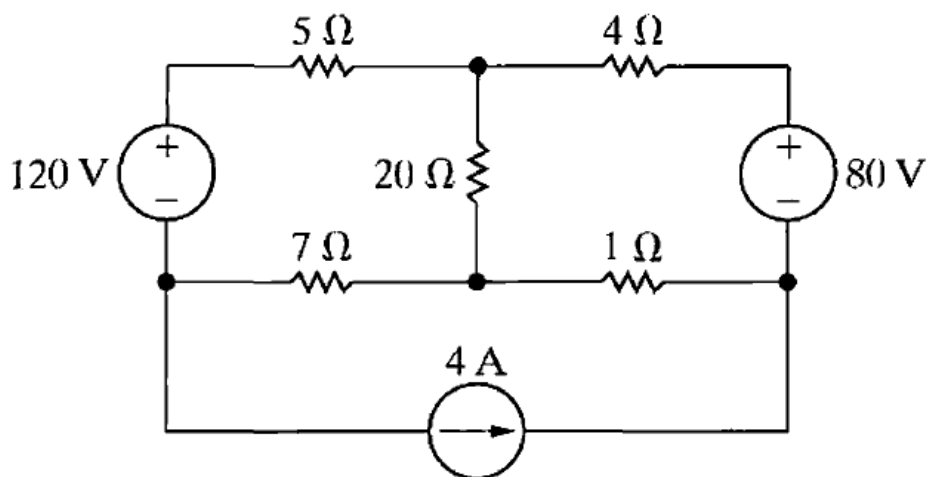
4.28 Use the node-voltage method to find the power developed by the 20 V source in the circuit in Fig. P4.28.
PSPICE
MULTISIM

Figure P4.28



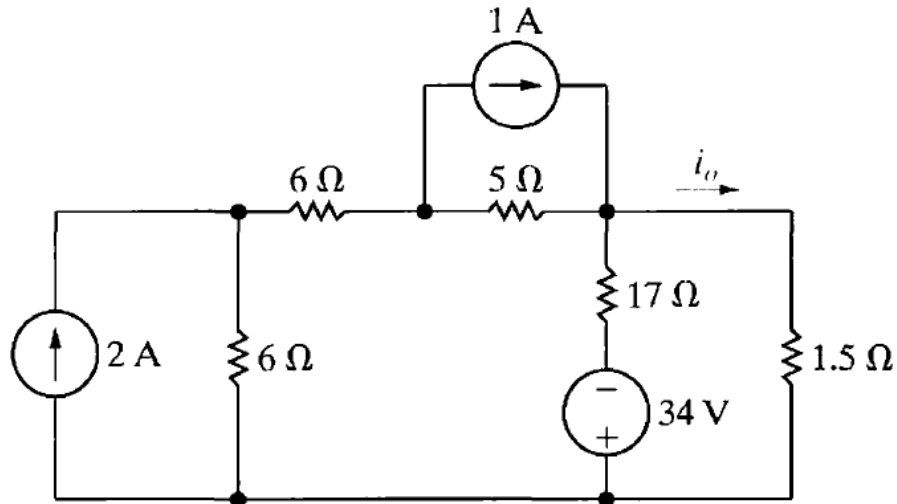
- 4.42** a) Use the mesh-current method to find how much power the 4 A current source delivers to the circuit in Fig. P4.42.
- b) Find the total power delivered to the circuit.
- c) Check your calculations by showing that the total power developed in the circuit equals the total power dissipated

Figure P4.42



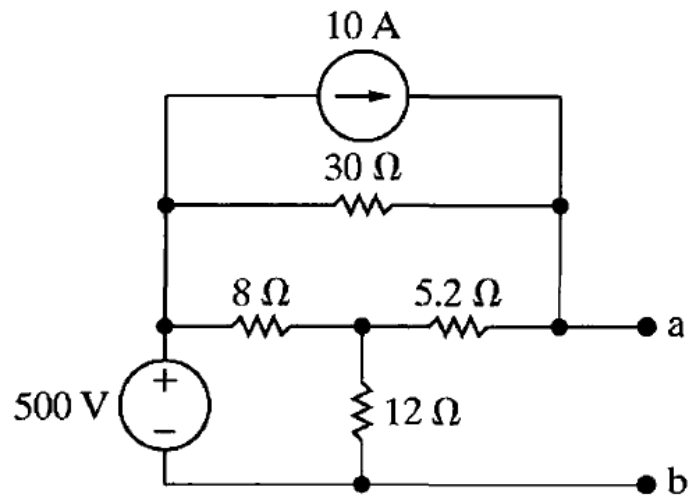
- 4.60** a) Use a series of source transformations to find i_o in the circuit in Fig. P4.60.
PSPICE
MULTISIM
b) Verify your solution by using the mesh-current method to find i_o .

Figure P4.60



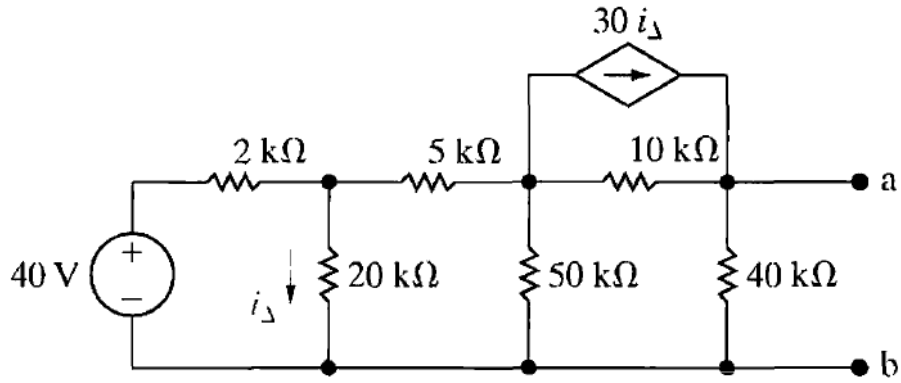
4.66 Find the Thévenin equivalent with respect to the terminals a,b for the circuit in Fig. P4.66.
PSICE
MULTISIM

Figure P4.66



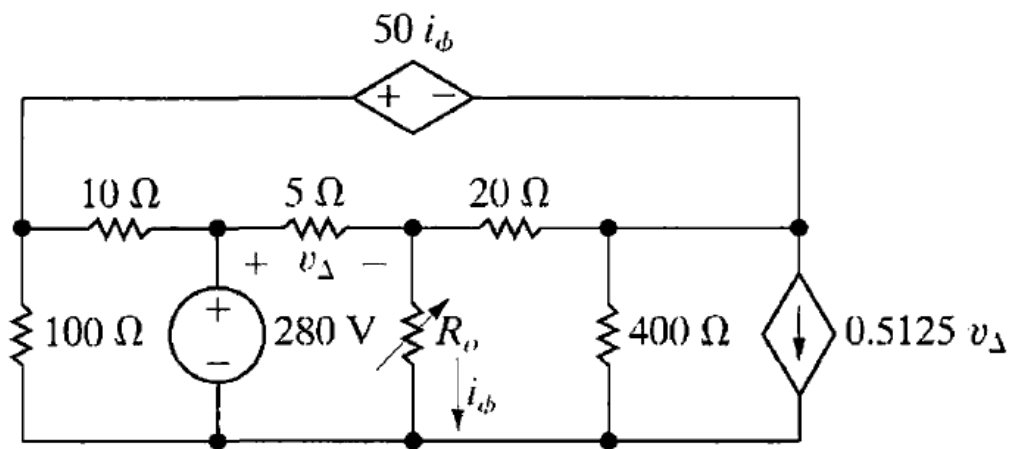
4.73 Find the Norton equivalent with respect to the terminals a,b for the circuit seen in Fig. P4.73.
PSPICE MULTISIM

Figure P4.73



- 4.88** The variable resistor in the circuit in Fig. P4.88 is adjusted for maximum power transfer to R_o .
- PSPICE
MULTISIM
- Find the numerical value of R_o .
 - Find the maximum power delivered to R_o .
 - How much power does the 280 V source deliver to the circuit when R_o is adjusted to the value found in (a)?

Figure P4.88



4.92 Use superposition to solve for i_o and v_o in the circuit in Fig. P4.92.

Figure P4.92

