4.12 Determine v_o in the circuit of Fig. 4.80 using the superposition principle.

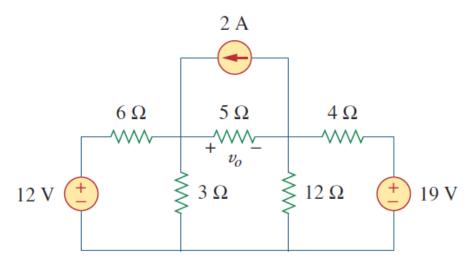


Figure 4.80 For Prob. 4.12.

4.22 For the circuit in Fig. 4.90, use source transformation to find *i*.

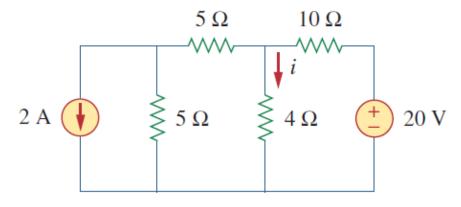


Figure 4.90 For Prob. 4.22.

4.35 Use Thevenin's theorem to find v_o in Prob. 4.12.

4.40 Find the Thevenin equivalent at terminals *a-b* of the circuit in Fig. 4.107.

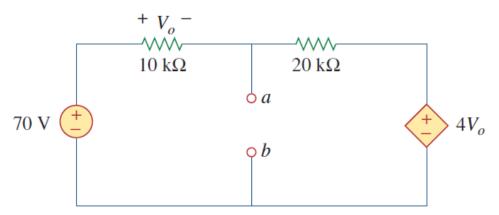


Figure 4.107

For Prob. 4.40.

4.48 Determine the Norton equivalent at terminals *a-b* for the circuit in Fig. 4.115.

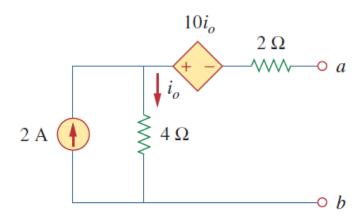


Figure 4.115

For Prob. 4.48.

4.66 Find the maximum power that can be delivered to the resistor R in the circuit of Fig. 4.132.

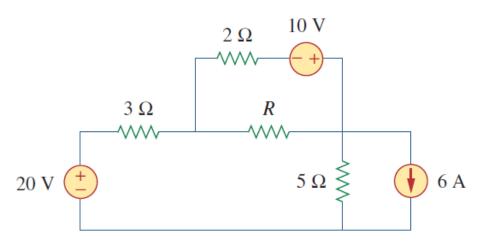


Figure 4.132

For Prob. 4.66.

5.11 Using Fig. 5.50, design a problem to help other students better understand how ideal op amps work.

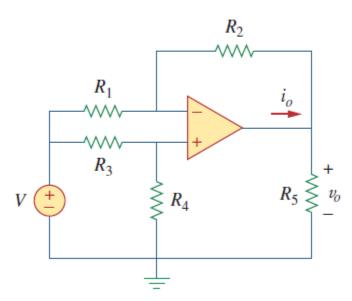


Figure 5.50 For Prob. 5.11.

5.13 Find v_o and i_o in the circuit of Fig. 5.52.

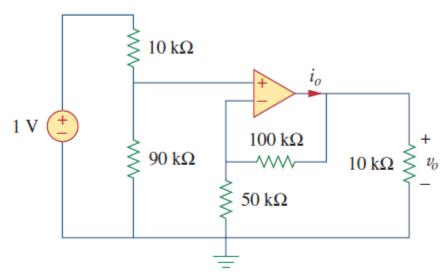


Figure 5.52

For Prob. 5.13.

5.54 Determine the voltage transfer ratio v_o/v_s in the op amp circuit of Fig. 5.82, where $R = 10 \text{ k}\Omega$.

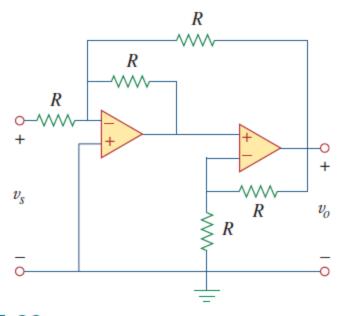


Figure 5.82

For Prob. 5.54.