Practice Problem 4.7

Use source transformation to find i_x in the circuit shown in Fig. 4.22.

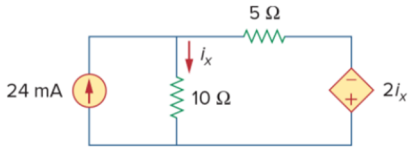

Figure 4.22
For Practice Prob. 4.7.

Answer: 7.059 mA.

Practice Problem 4.9

Find the Thevenin equivalent circuit of the circuit in Fig. 4.34 to the left of the terminals.

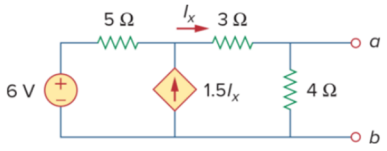

Figure 4.34
For Practice Prob. 4.9.

Answer: $V_{Th} = 5.333$ V, $R_{Th} = 444.4$ mΩ.

Practice Problem 4.10

Obtain the Thevenin equivalent of the circuit in Fig. 4.36.

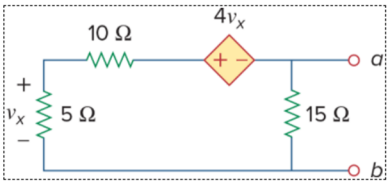

Figure 4.36
For Practice Prob. 4.10.

Answer: $V_{Th} = 0$ V, $R_{Th} = -7.5$ Ω.

Practice Problem 4.12

Find the Norton equivalent circuit of the circuit in Fig. 4.45 at terminals *a-b*.

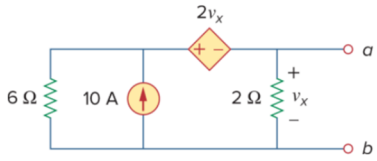

Figure 4.45
For Practice Prob. 4.12.

Answer: $R_N = 1$ Ω, $I_N = 10$ A.

Practice Problem 4.13

Determine the value of R_L that will draw the maximum power from the rest of the circuit in Fig. 4.52. Calculate the maximum power.

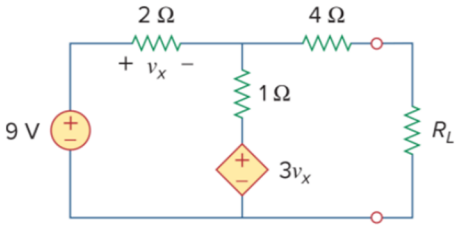

Figure 4.52
For Practice Prob. 4.13.

Answer: 4.222 Ω, 2.901 mW.