CH9 PROBLEMS

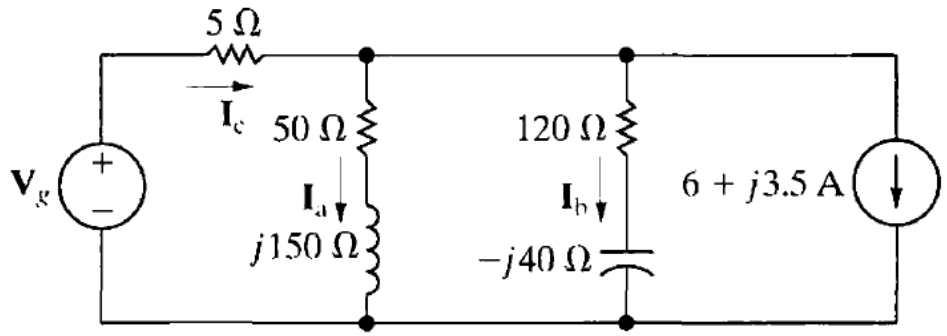
9.33 The phasor current $\mathbf{I}_a$ in the circuit shown in Fig. P9.33 is $2\angle 0^\circ$ A.

PSPICE MULTISIM

a) Find $\mathbf{I}_b$, $\mathbf{I}_c$, and $\mathbf{V}_g$.

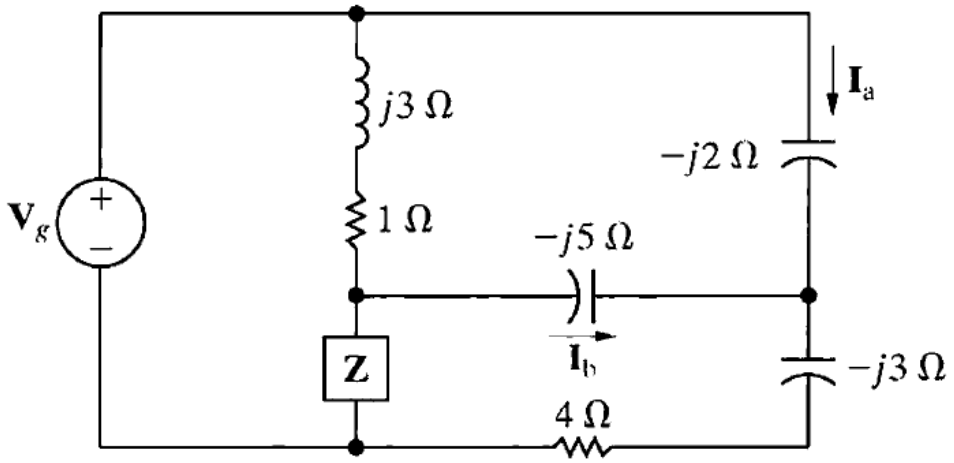
b) If $\omega = 800$ rad/s, write the expressions for $i_b(t)$, $i_c(t)$, and $v_g(t)$.

Figure P9.33



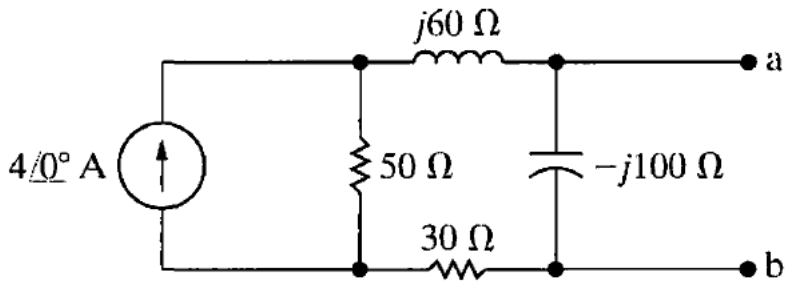
9.36 Find $\mathbf{I}_b$ and Z in the circuit shown in Fig. P9.36 if $\mathbf{V}_g = 25\angle 0^\circ$ V and $\mathbf{I}_a = 5\angle 90^\circ$ A.

Figure P9.36



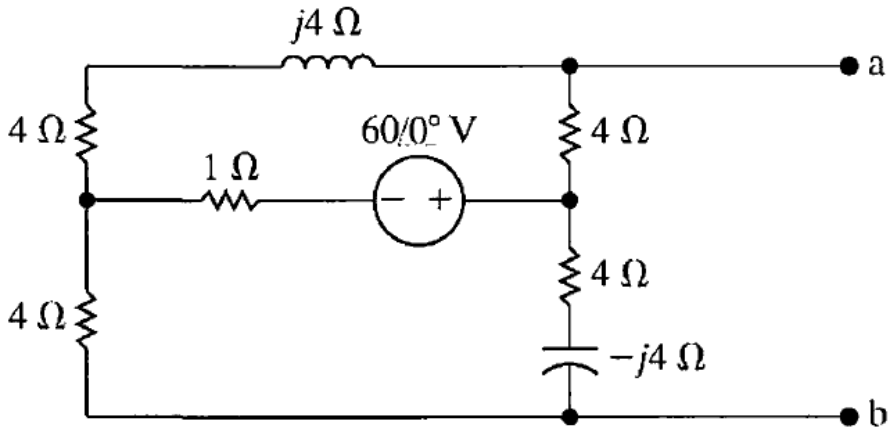
9.46 Use source transformations to find the Norton equivalent circuit with respect to the terminals a,b for the circuit shown in Fig. P9.46.

Figure P9.46



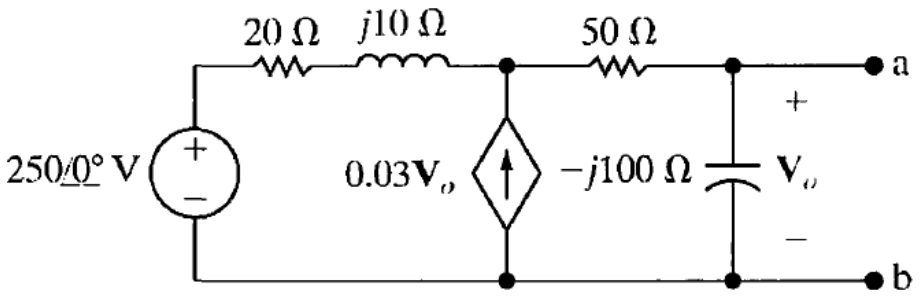
9.47 Find the Thévenin equivalent circuit with respect to the terminals a,b for the circuit shown in Fig. P9.47.

Figure P9.47



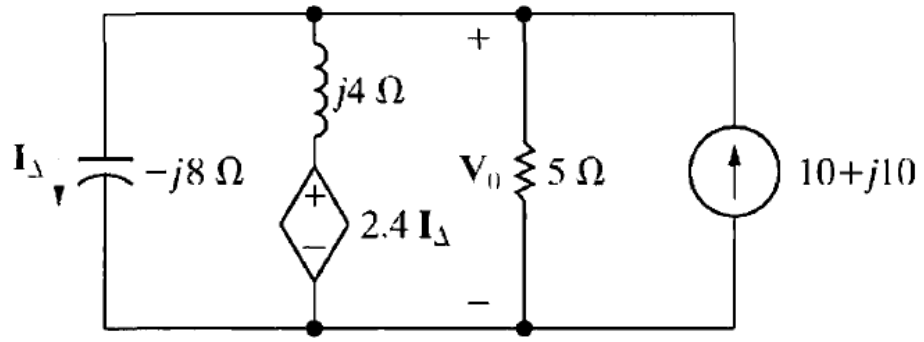
9.48 Find the Thévenin equivalent circuit with respect to the terminals a,b of the circuit shown in Fig. P9.48.

Figure P9.48



9.59 Use the node-voltage method to find the phasor voltage $\mathbf{V}_o$ in the circuit shown in Fig. P9.59. Express the voltage in both polar and rectangular form.

Figure P9.59



9.63 Use the mesh-current method to find the branch currents $\mathbf{I}_a$, $\mathbf{I}_b$, $\mathbf{I}_c$, and $\mathbf{I}_d$ in the circuit shown in Fig. P9.63.

Figure P9.63