Problem 3.79  The circuit in Problem 3.44 was solved using MATLAB® or MathScript software. It can be solved just as easily using Multisim. Using Multisim, draw the circuit in Fig. P3.44 and solve for all node voltages and the current $I_0$.

Solution: The circuit is shown in Fig. 3.79(a).

![Fig. P3.79(a)](image)

The node voltage solution is shown in Fig. 3.79(b).

![Fig. P3.79(b)](image)

There are two ways to solve for $I_0$. Since we know that $I_0 = V(3)/R8$, we can enter this expression in the DC Operating Point tool before solving. The last entry in
the table in Fig. 3.79(b) shows the expression and its numerical value (300 mV). Alternatively, we can determine $I_0$ by inserting an artificial voltage source of zero voltage in the branch that carries $I_0$, as shown in Fig. 3.79(c).

Current $I(V2)$ is the current flowing through the artificial voltage source V2. It is listed in the solution table in Fig. 3.79(d), and its value is indicated as 300 mV.