Chapter 5, Solution 65

Find v_o in the op amp circuit of Fig. 5.92.

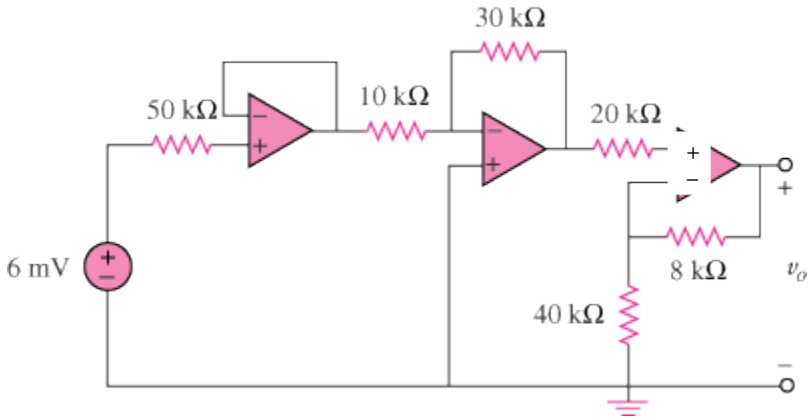

Figure 5.92
For Prob. 5.65.

Solution

The output of the first op amp (to the left) is 6 mV. The second op amp is an inverter so that its output is

$$v_o' = -\frac{30}{10}(6\text{mV}) = -18\,\text{mV}$$

The third op amp is a noninverter so that

$$v_o' = \frac{40}{40+8}v_o \quad \longrightarrow \quad v_o = \frac{48}{40}v_o' = \underline{-21.6\,\text{mV}}$$