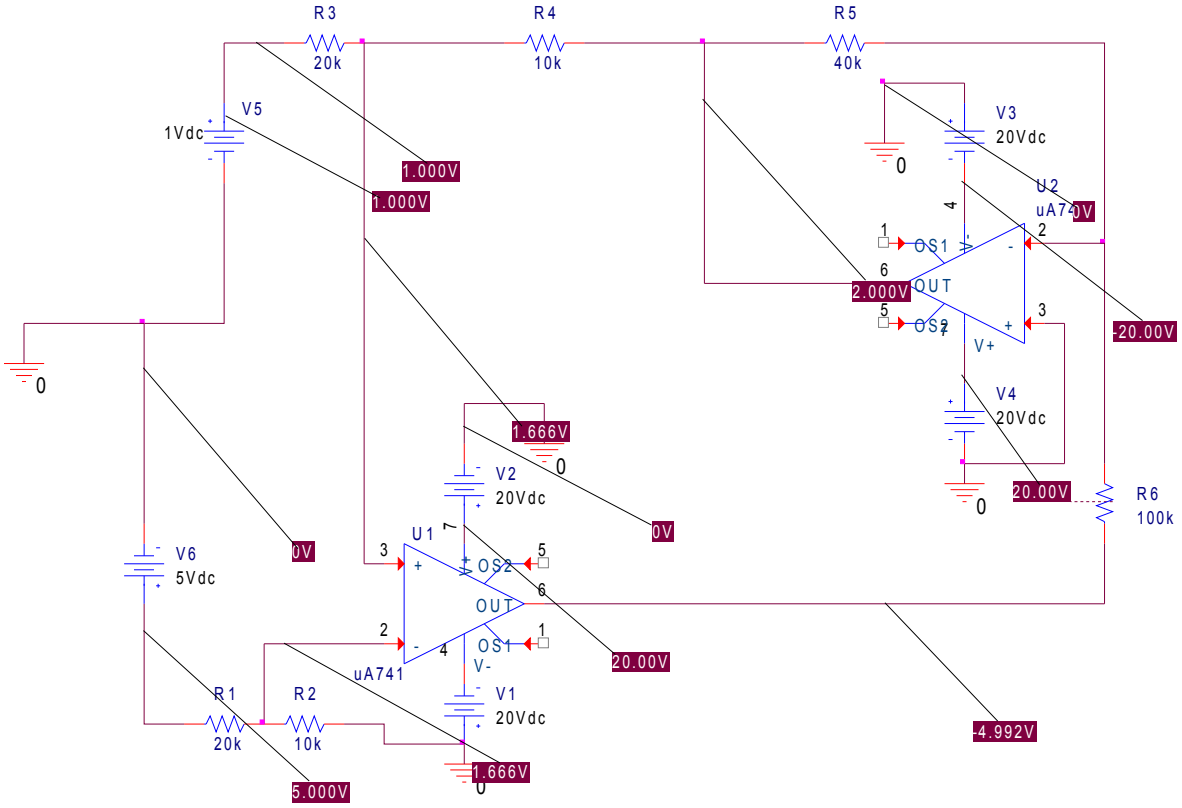
Chapter 5, Solution 79.

The schematic is shown below.

$$v_o = \mathbf{-4.992\ V}$$



Checking using nodal analysis we get,

For the first op-amp we get $v_{a1} = [5/(20+10)]10 = 1.6667\ V = v_{b1}$.

For the second op-amp, $[(v_{b1} - 1)/20] + [(v_{b1} - v_{c2})/10] = 0$ or $v_{c2} = 10[1.6667–1)/20] + 1.6667 = 2\ V$;

$[(v_{a2} - v_{c2})/40] + [(v_{a2} - v_{c1})/100] = 0$; and $v_{b2} = 0 = v_{a2}$. This leads to $v_{c1} = –2.5v_{c2}$. Thus,

$$= \mathbf{-5\ V}.$$