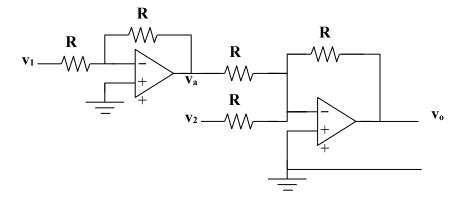
## Chapter 5, Solution 51.

We achieve this by cascading an inverting amplifier and two-input inverting summer as shown below:



Verify:

$$\begin{aligned} \mathbf{v}_{o} &= -\mathbf{v}_{a} - \mathbf{v}_{2} \\ \mathbf{v}_{a} &= -\mathbf{v}_{1}. \text{ Hence} \\ \mathbf{v}_{o} &= \mathbf{v}_{1} - \mathbf{v}_{2}. \end{aligned}$$