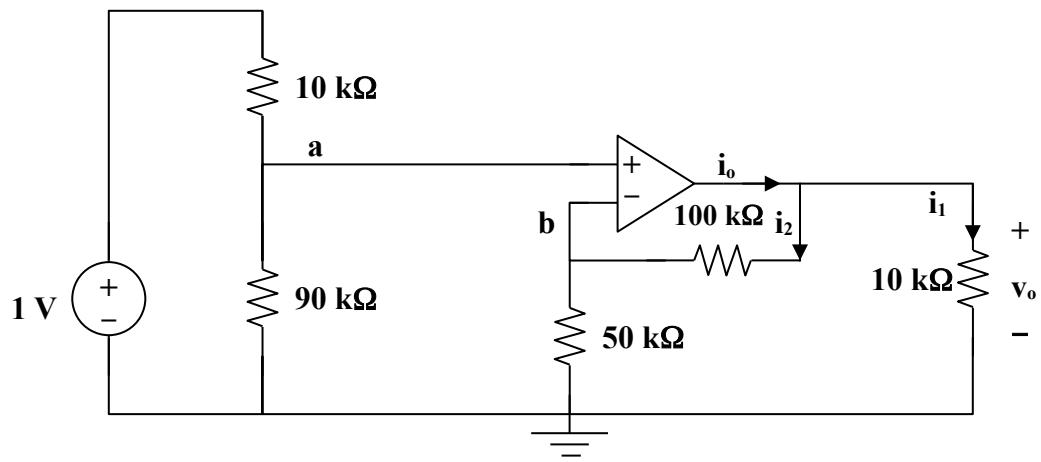


**Chapter 5, Solution 13.**



By voltage division,

$$v_a = \frac{90}{100}(1) = 0.9\text{V}$$

$$v_b = \frac{50}{150}v_o = \frac{v_o}{3}$$

But  $v_a = v_b \longrightarrow \frac{v_o}{3} = 0.9 \quad v_o = \mathbf{2.7\text{V}}$

$$i_o = i_1 + i_2 = \frac{v_o}{10\text{k}} + \frac{v_o}{150\text{k}} = 0.27\text{mA} + 0.018\text{mA} = \mathbf{288\text{ }\mu\text{A}}$$