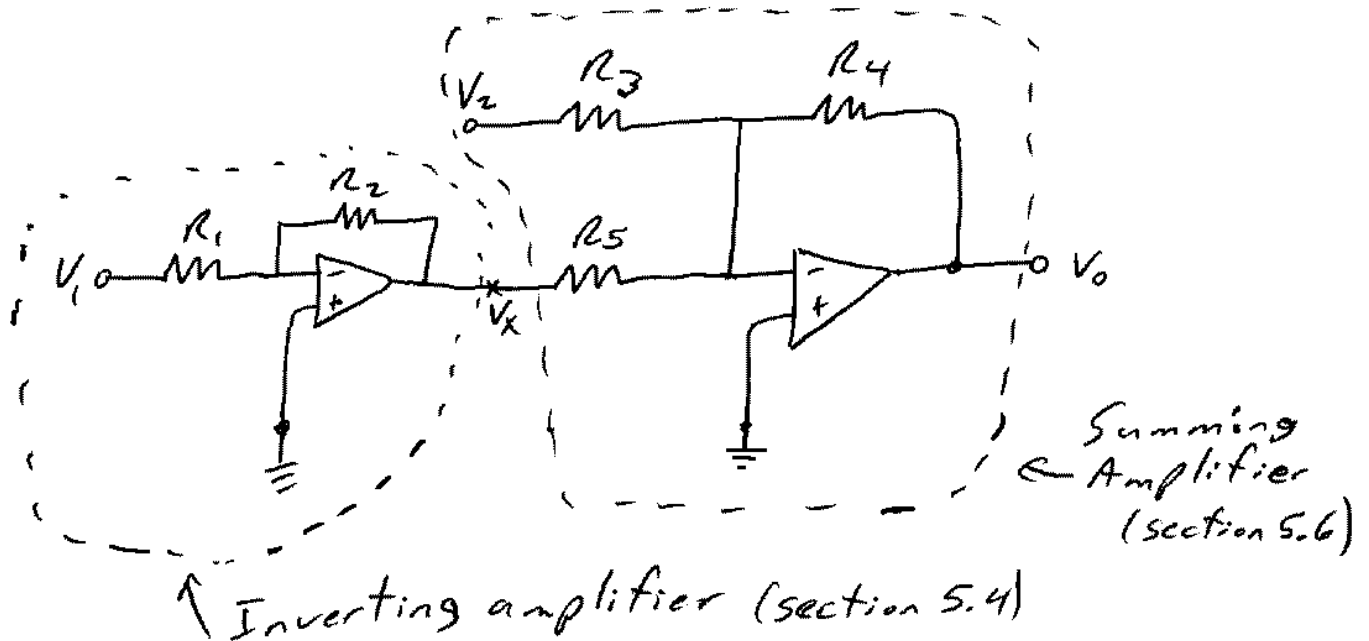


**Example-** For the circuit shown, find the output voltage  $v_0$  in terms of the input voltages  $v_1$  and  $v_2$ .



$$v_x = -\frac{R_2}{R_1} v_1 \quad (5.9)$$

$$v_0 = -\left(\frac{R_4}{R_3} v_2 + \frac{R_4}{R_5} v_x\right) \quad (5.15)$$

$$= -\left(\frac{R_4}{R_3} v_2 + \frac{R_4}{R_5} \left(-\frac{R_2}{R_1}\right) v_1\right)$$

$$v_0 = \frac{R_2 R_4}{R_1 R_5} v_1 - \frac{R_4}{R_3} v_2$$