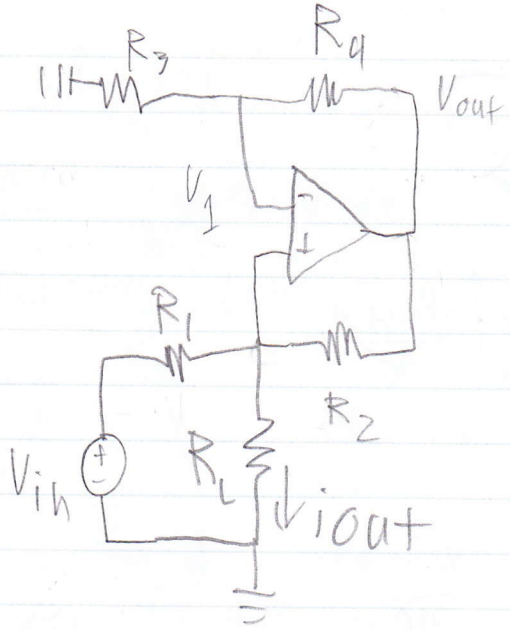
8



$$i_3 = i_4 = \frac{V_1}{R_3}$$

$$V_{out} - \frac{R_4}{R_3} V_1 = V_1$$

$$\frac{V_{out} - V_1}{R_2} = i_2$$

$$\frac{V_{in} - V_1}{R_1} = i_1$$

$$i_{out} = \frac{V_1}{R_L} = \frac{V_{in} - V_1}{R_1} + \frac{V_{out} - V_1}{R_2}$$

$$V_{out} = V_L\left(1 + \frac{R_4}{R_3}\right)$$

$$\frac{V_L}{R_L} = \frac{V_{in} - V_1}{R_1} + \frac{V_1 + V_1 \frac{R_3}{R_4} - V_1}{R_2}$$

$$V_L = V_{in} - V_1 + V_1 \frac{R_1 R_3}{R_2 R_4}$$

$$V_L = V_{in} - V_1\left(\frac{R_1 R_3}{R_2 R_4} - 1\right)$$

$$R_2 R_3 = R_1 R_4$$

$$R_3 = \frac{R_1 R_4}{R_2}$$