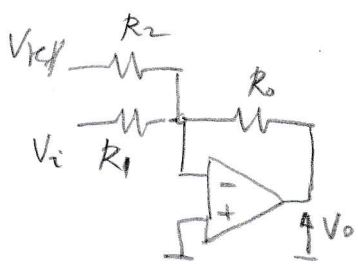


1.



$$V_i \left( \frac{1}{R_1} + \frac{1}{R_2} + \frac{1}{R_o} \right) - V_{if} \cdot \frac{1}{R_2} - V_i \cdot \frac{1}{R_1} - V_o \cdot \frac{1}{R_o} = 0$$

$$V_o = -\frac{R_o}{R_1} \cdot V_i - \frac{R_o}{R_2} V_{if}$$

$$(V_i = 5V, V_o = 0V) \Rightarrow 0 = -\frac{R_o}{R_1} 5 - \frac{R_o}{R_2} (-5) \Rightarrow R_1 = R_2$$

$$(V_i = 0, V_o = 10V) \Rightarrow 10 = -\frac{R_o}{R_1} \cdot 0 - \frac{R_o}{R_2} (-5) \Rightarrow \frac{R_o}{R_2} = 2 \Rightarrow R_2 = 50k\Omega = R_1$$

2.

