

$$V_1 = V_2 = 0 \quad I_1 = I_2 = 0$$

$$I_{in} = \frac{V_{in} - V_2}{R_{in}} \Rightarrow \frac{V_{in}}{R_{in}}$$

$$I_f = \frac{V_2 - V_{out}}{R_f} \Rightarrow \frac{-V_{out}}{R_f}$$

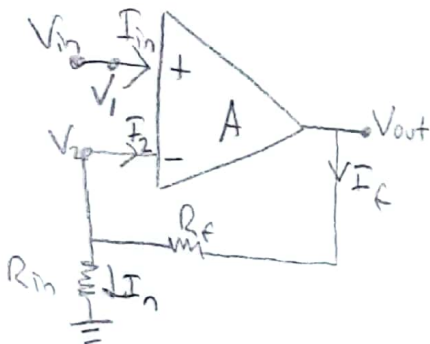
Kirchoff

$$I_{in} = I_f + I_2$$

$$\frac{V_{in}}{R_{in}} = \frac{-V_{out}}{R_f} \Rightarrow \frac{V_{out}}{V_{in}} = -\frac{R_f}{R_{in}}$$

R_f	R_{in}	V_{out}	Kazanç
1kΩ	100Ω	-10	-10
	1kΩ	-1	-1
	5kΩ	-0.2	-0.2
	10kΩ	-0.1	-0.1

$$V_{in} = 1V$$



$$V_1 = V_2 = V_{in} \quad I_{in} = I_2 = 0$$

$$I_n = \frac{V_2}{R_{in}} \Rightarrow \frac{V_{in}}{R_{in}}$$

$$I_f = \frac{V_{out} - V_2}{R_f} \Rightarrow \frac{V_{out} - V_{in}}{R_f}$$

Kirchoff

$$I_f = I_n + I_2$$

$$\frac{V_{out} - V_{in}}{R_f} = \frac{V_{in}}{R_{in}} \Rightarrow \frac{V_{out}}{V_{in}} = 1 + \frac{R_f}{R_{in}}$$