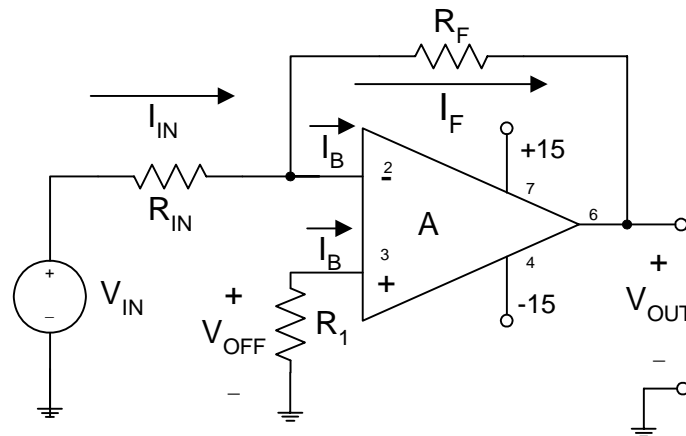


INVERTING AMPLIFIER OFFSET DUE TO BIAS CURRENT



$$I_{IN} - I_B - I_F = 0$$

$$V_{OFF} = -R_1 I_B$$

$$\frac{V_{IN} - V_{OFF}}{R_{IN}} - I_B - \frac{V_{OFF} - V_{OUT}}{R_F} = 0$$

but with no input signal, $V_{IN} = 0$, and we want $V_{OUT} = 0$, so :

$$-I_B = V_{OFF} \left[\frac{1}{R_{IN}} + \frac{1}{R_F} \right]; \quad -I_B = -R_1 I_B \left[\frac{1}{R_{IN}} + \frac{1}{R_F} \right]$$

thus : $\left[\frac{1}{R_{IN}} + \frac{1}{R_F} \right] = \left[\frac{1}{R_1} \right]$ as a condition for no offset at V_o .

	$V_{OUT} = \left[+I_B R_F // R_{IN} - I_B R_1 \right] A_{VOL}$ $V_{OUT} = 0 \text{ if } R_F // R_{IN} = R_1$
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