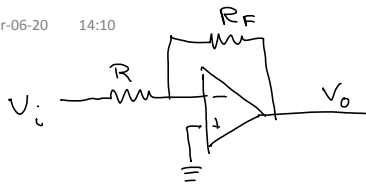


ORDINARY INVERTING Amplifier

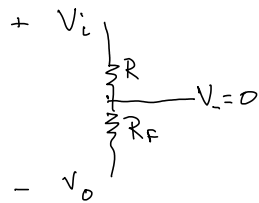
October-06-20 14:10



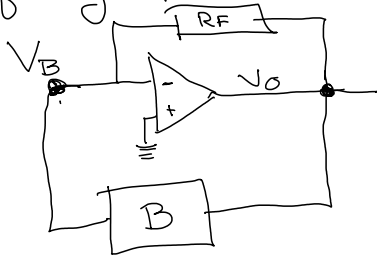
$$V_o = -\frac{R_F}{R} V_i$$

this output would make Voltage at $V_- = 0$

Rule 1 $\rightarrow V_- = V_+ = 0$ in this case (Since V_+ tied to ground)



ADD frequency dependent positive feedback path



I have included R in the path of B

$$I f B = -\frac{R}{R_F} V_o$$

180° phase shift

Remember $B = B(f)$

the Voltage from B that we add to V_-

$$V_B = -\frac{R}{R_F} V_o = \frac{-R}{R_F} \left(-\frac{R_F}{R} \right) V_i = V_i$$

V_- was at 0V due to negative feedback

Positive feedback B add V_i to this voltage keeps $V_- = V_i > V_+$

$\Delta V \neq 0$ $V_- > V_+$ and V_o goes even lower