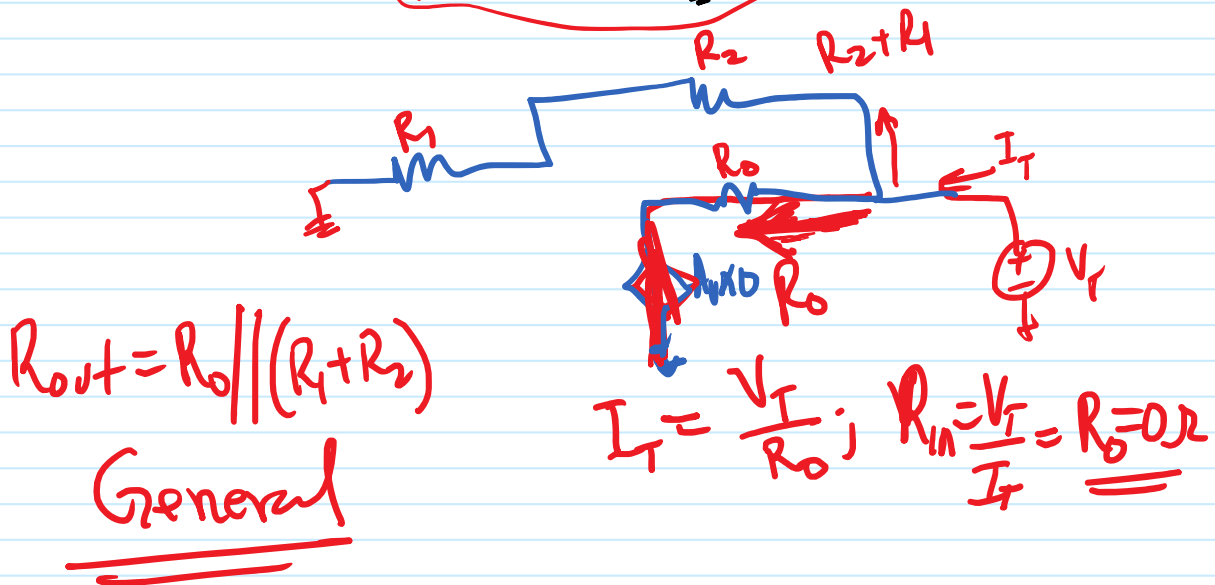
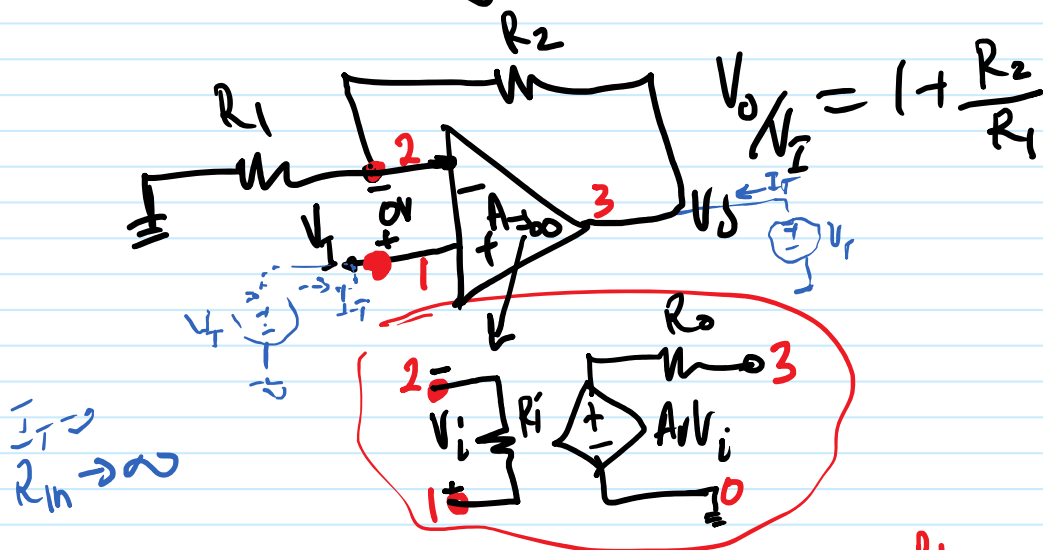


Ideal Amplifiers

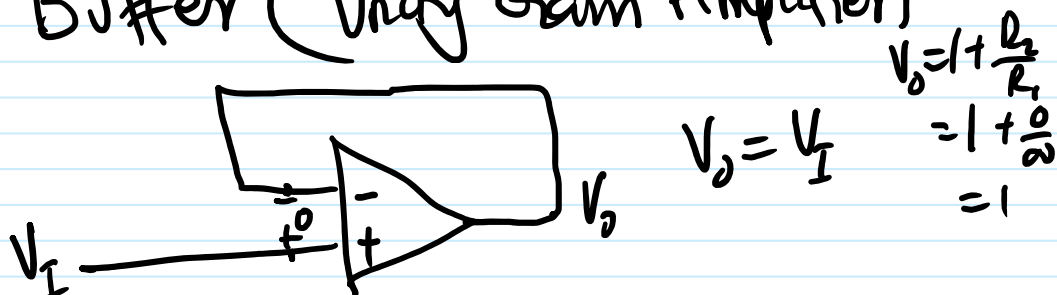
Friday, January 26, 2024 4:02 PM

Op-amp-based amplifiers configurations

1. Non-inverting Amp.



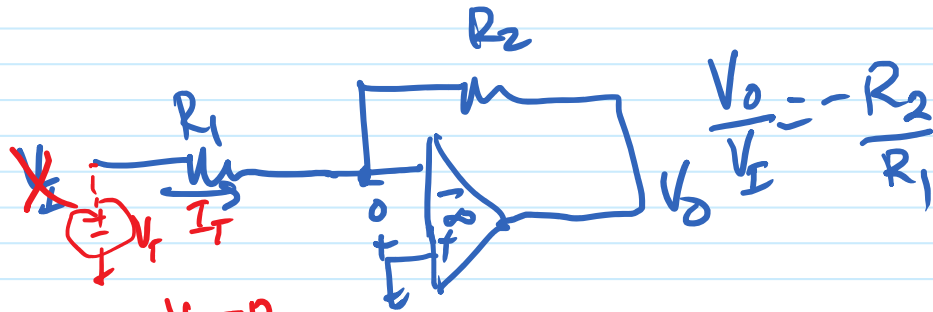
2. Buffer (Unity Gain Amplifier)



$$R_{in} = \infty$$

$$R_{out} = 0$$

3. Inverting Amplifier



$$\frac{V_O}{V_I} = -\frac{R_2}{R_1}$$

$$I_I = \frac{V_I - 0}{R_1} \Rightarrow \frac{V_I}{I_I} = R_{in} = R_1$$

$$R_{in} = R_1$$

$$R_{out} = \underline{\underline{0 \Omega}}$$