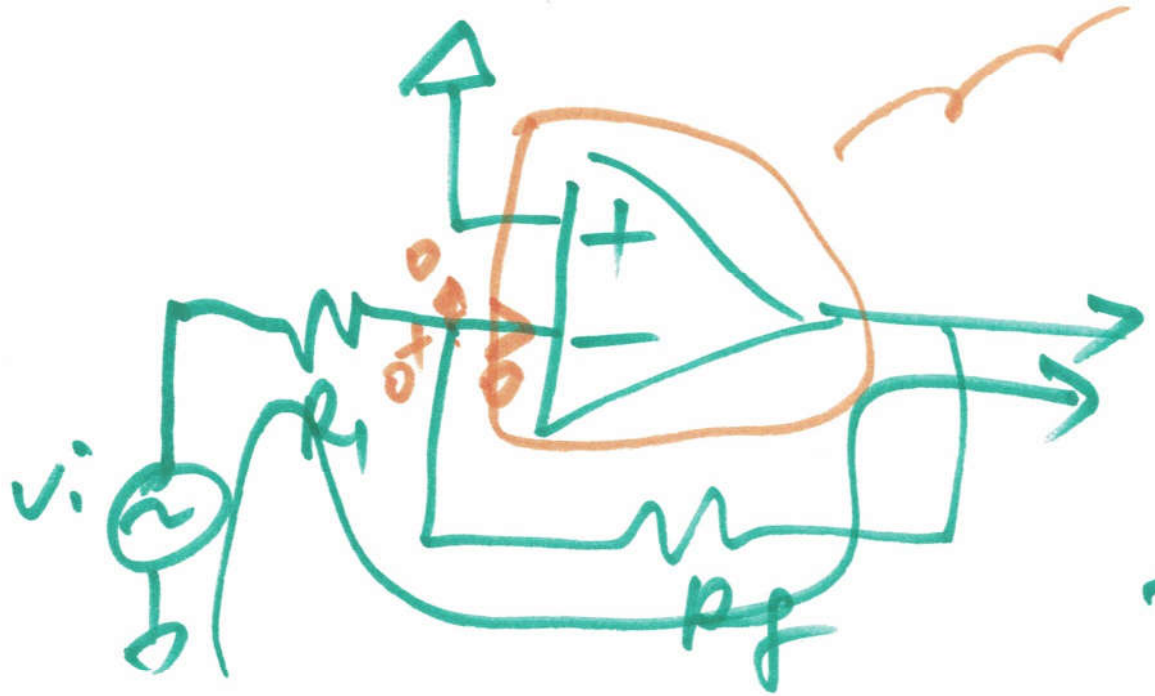
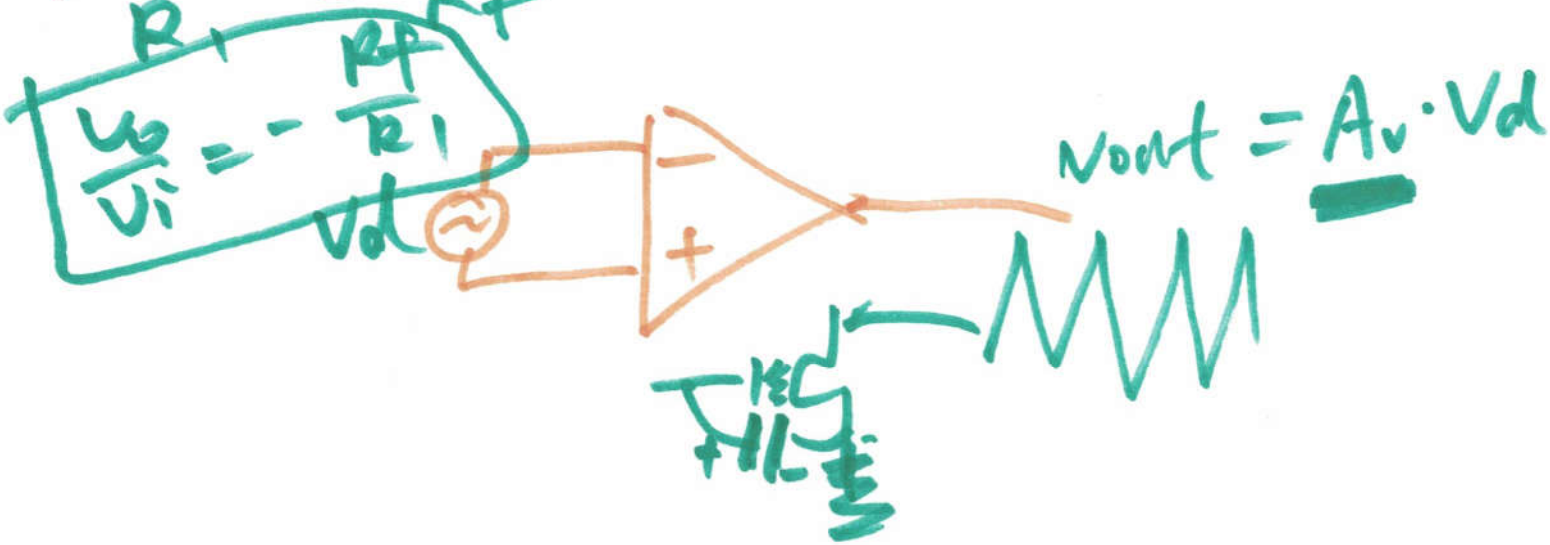
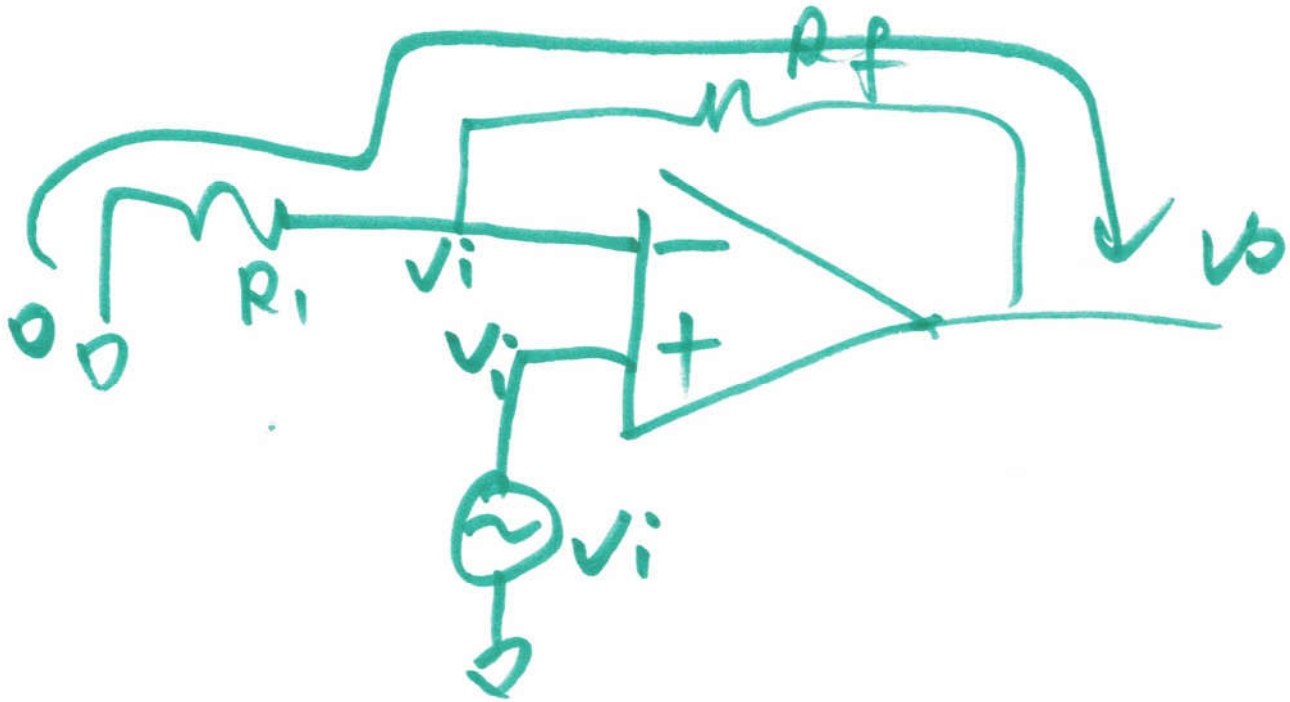


$$V_{out} = -\frac{R_f}{R_1} \cdot V_{in}$$

$$\frac{V_i - 0}{R_1} = \frac{0 - V_{o\,close-loop}}{R_f}$$

$$\frac{V_o}{V_i} = -\frac{R_f}{R_1}$$



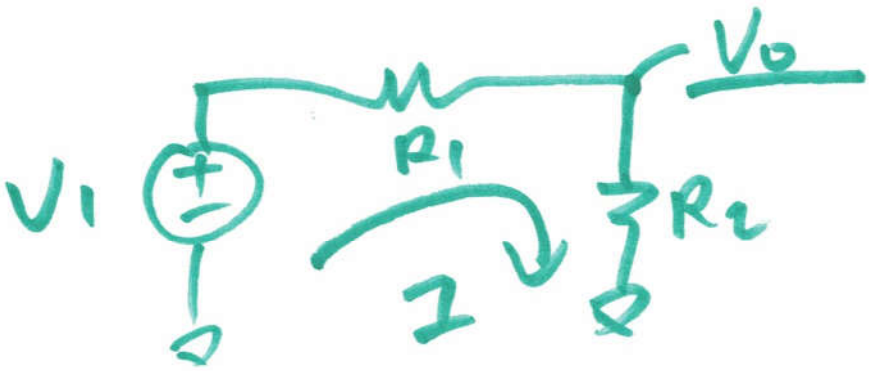


$$\frac{0 - V_i}{R_1} = \frac{V_i - V_o}{R_f}$$

$$\frac{R_f}{R_1} = \frac{V_i - V_o}{-V_i}$$

$$\frac{R_f}{R_1} = -1 + \frac{V_o}{V_i}$$

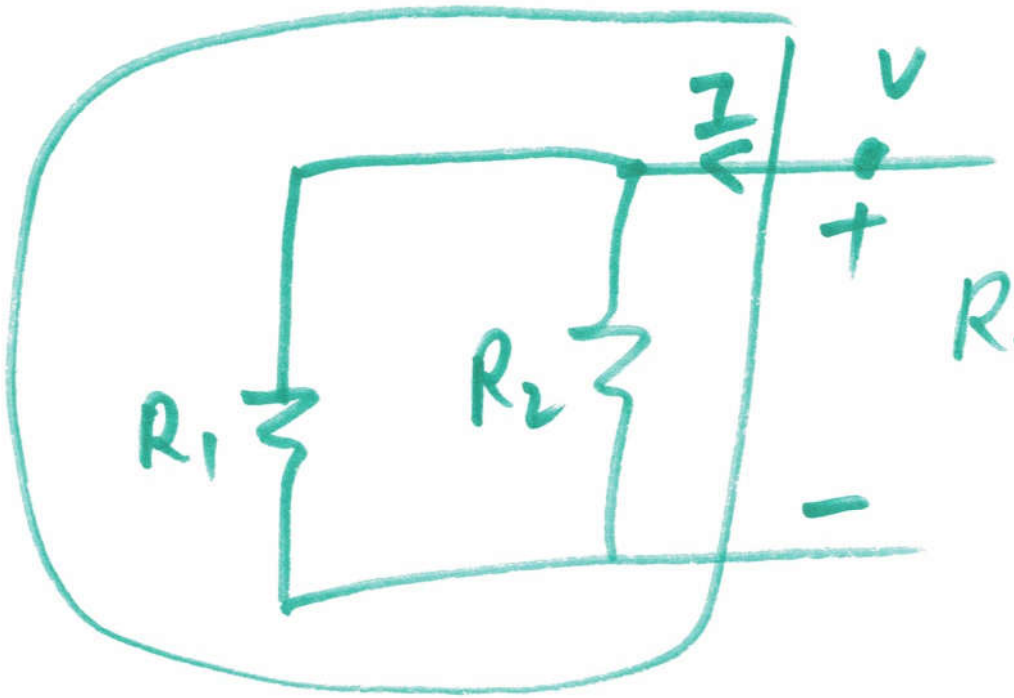
$$\boxed{\frac{V_o}{V_i} = \frac{R_f}{R_1} + 1}$$



$$I = \frac{V_1}{R_1 + R_2}$$

$$V_o = I \cdot R_2 = \frac{V_1}{R_1 + R_2} \cdot R_2$$

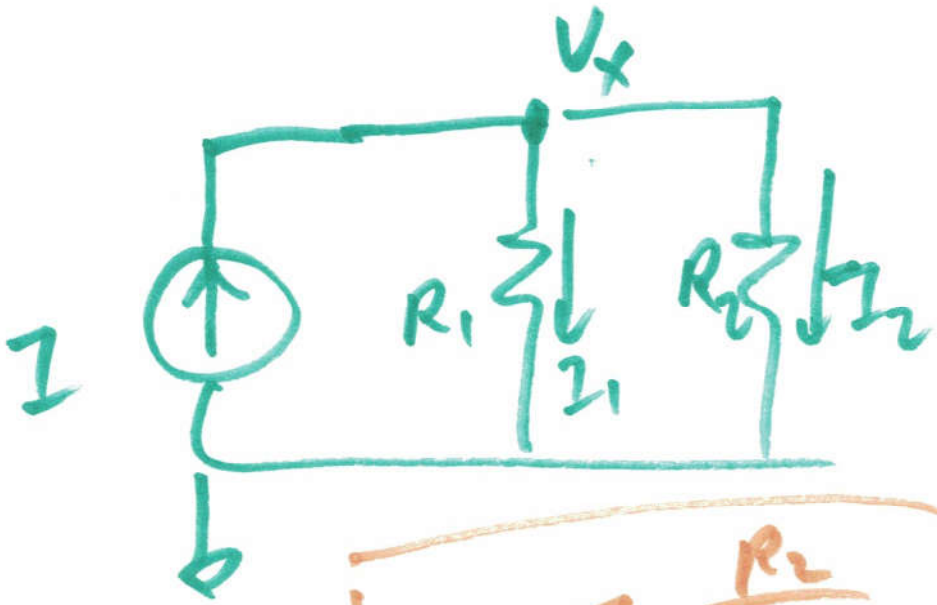
$$\boxed{\frac{V_o}{V_1} = \frac{R_2}{R_1 + R_2}}$$



$$\frac{V}{R_{eq}} = \frac{V}{R_1} + \frac{V}{R_2} \quad (KCL)$$

$$\frac{1}{R_{eq}} = \frac{1}{R_1} + \frac{1}{R_2}$$

$$R_{eq} = \left(\frac{1}{R_1} + \frac{1}{R_2}\right)^{-1} = \frac{R_1 R_2}{R_1 + R_2}$$



$$I_1 = I \cdot \frac{R_2}{R_1+R_2}$$

$$I_2 = I \cdot \frac{R_1}{R_1+R_2}$$

~~$\frac{V_x}{\frac{R_1 R_2}{R_1+R_2}} = \frac{V_x}{R_1}$~~

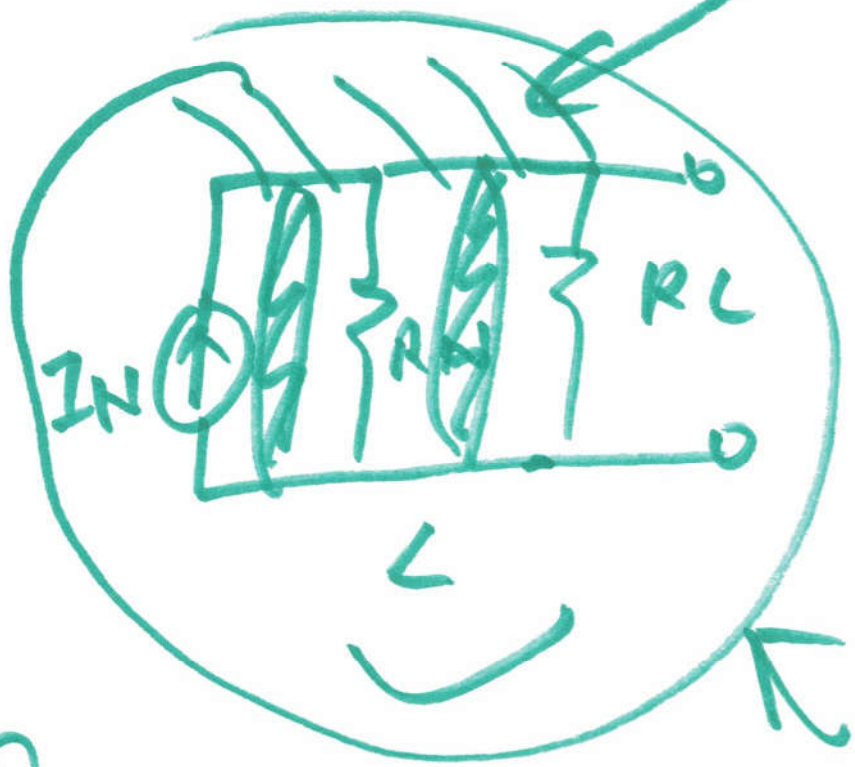
$$I_1 = \frac{V_x}{R_1}$$

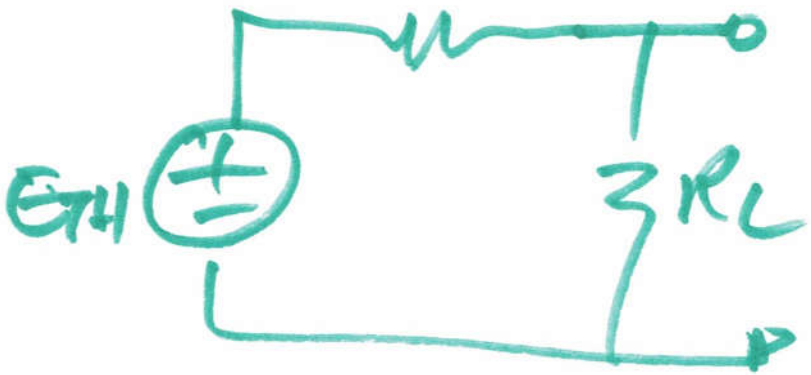
$$= \frac{I \cdot R_{eq}}{R_1}$$

$$= \frac{I \cdot \frac{R_1 \cdot R_2}{R_1+R_2}}{R_1} = I \cdot \frac{R_2}{R_1+R_2}$$

HWs, Quiz, Notes/videos

NORTON / Thevenin





NORTON