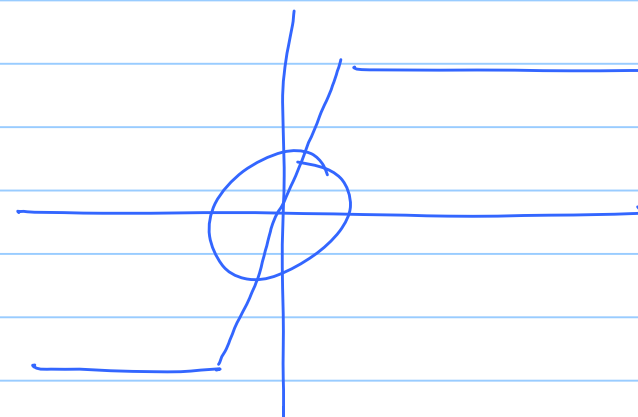
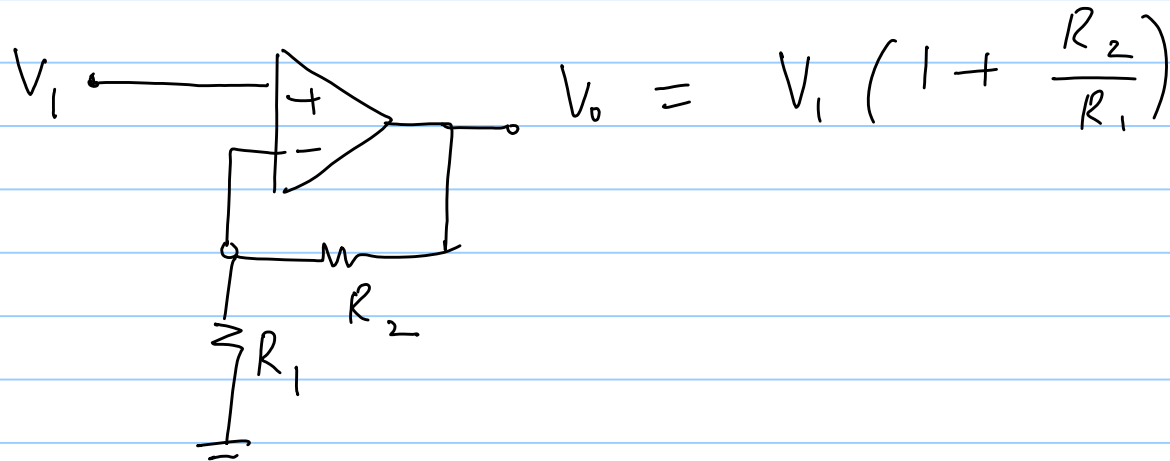


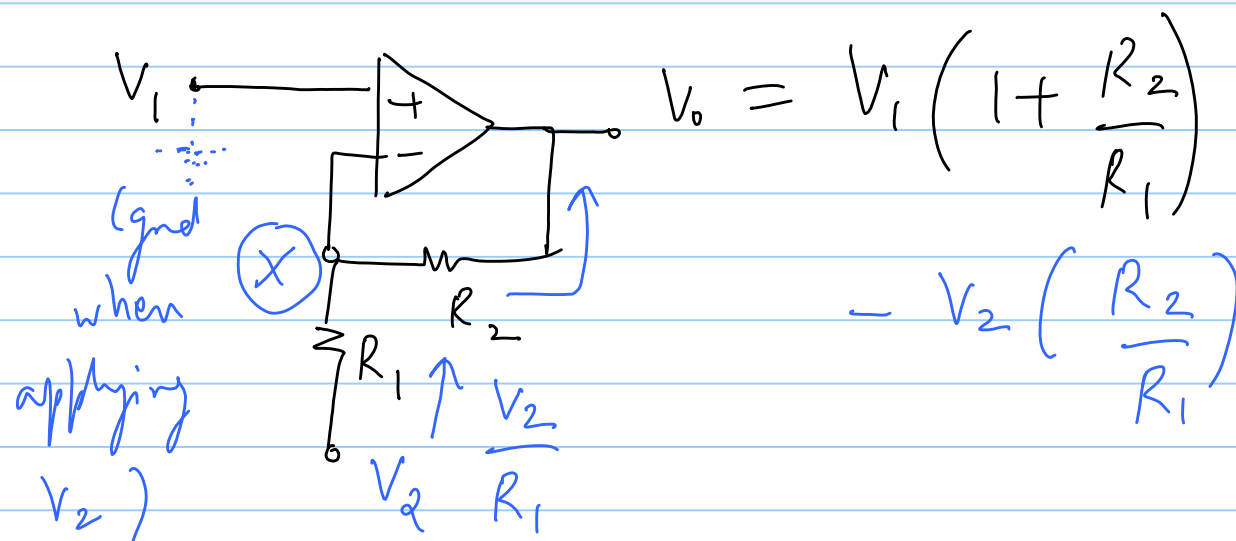
29/01/19

Lec 8

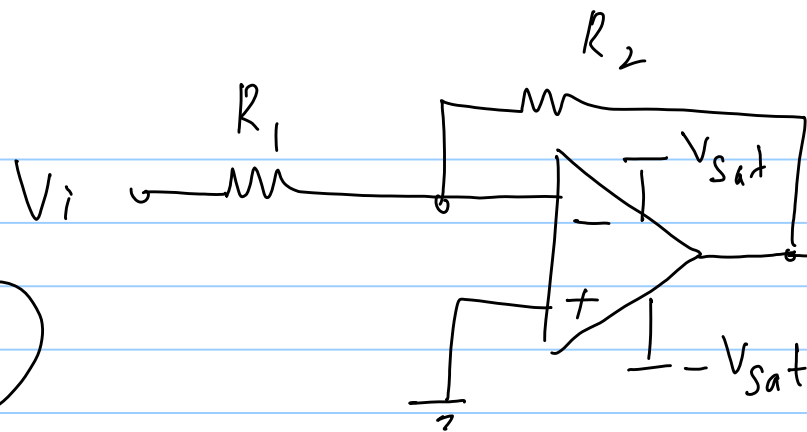
Non-inverting
amplifier



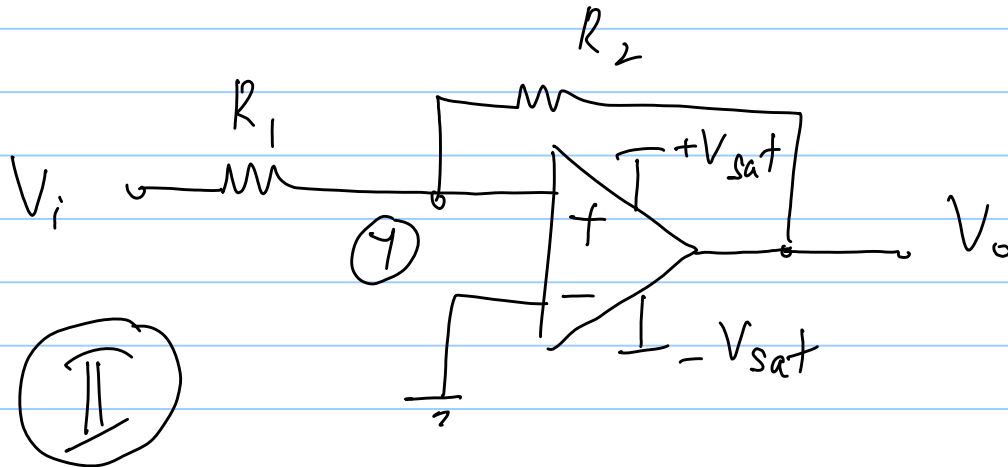
$$V_x = 0$$



(I)



$$V_o = -\frac{R_2}{R_1} V_i \quad \text{"Inverting amplifier"}$$



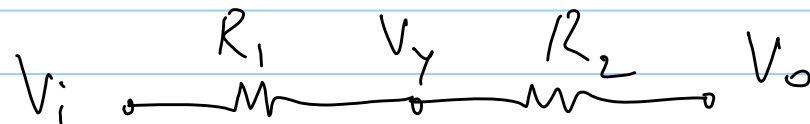
(II)

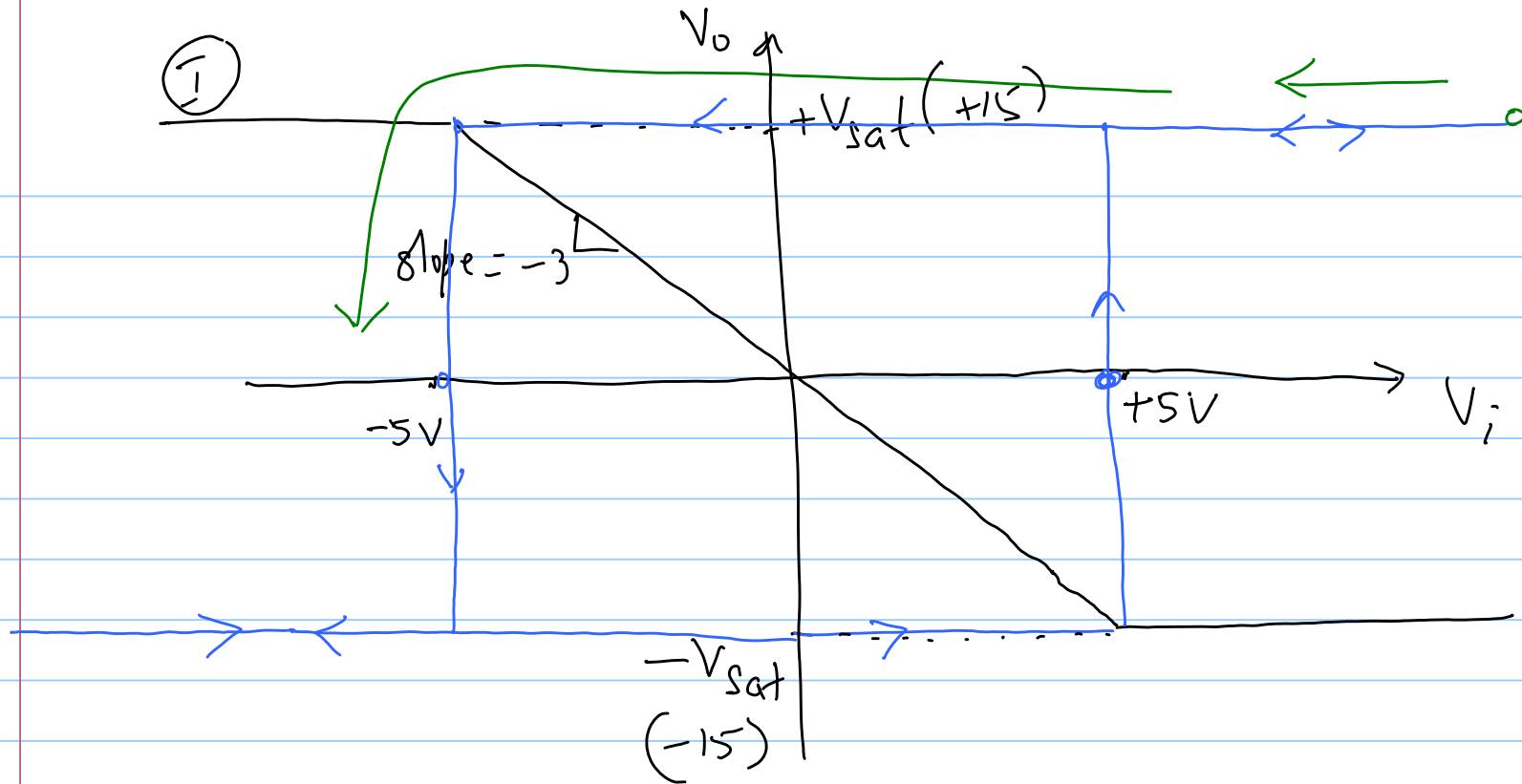
Change signs of opamp.

$$\left. \begin{array}{l} +V_{sat} \\ -V_{sat} \end{array} \right\} - \pm 15V$$

$$-R_2/R_1 = -3$$

$$V_y = \frac{R_1 V_o + R_2 V_i}{R_1 + R_2}$$

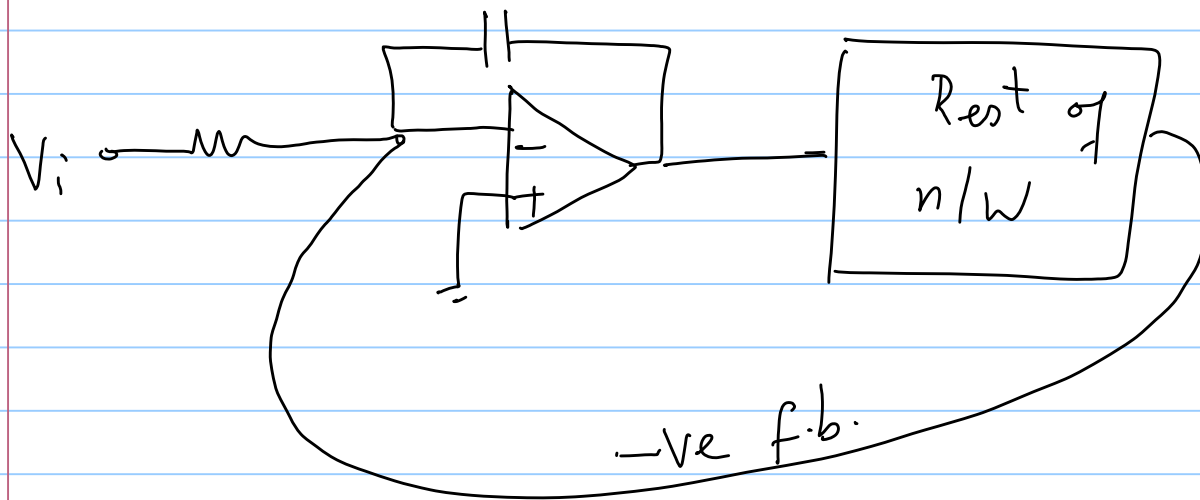
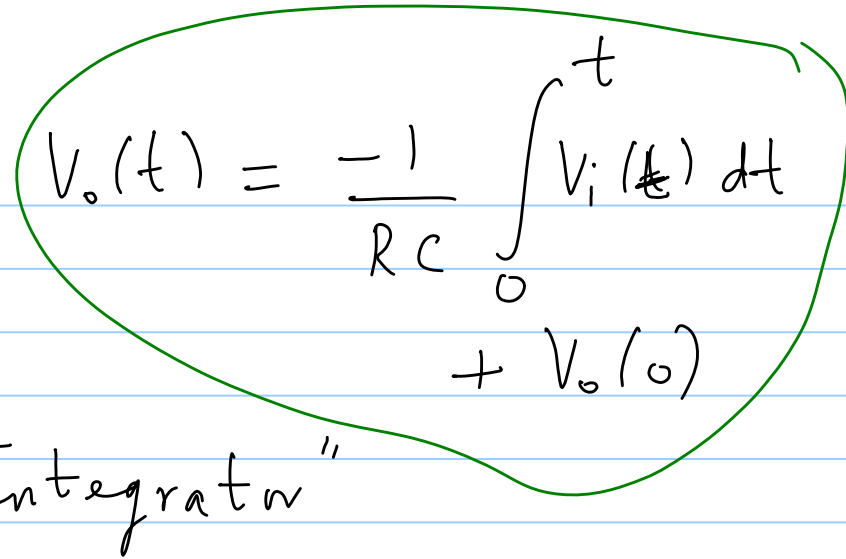


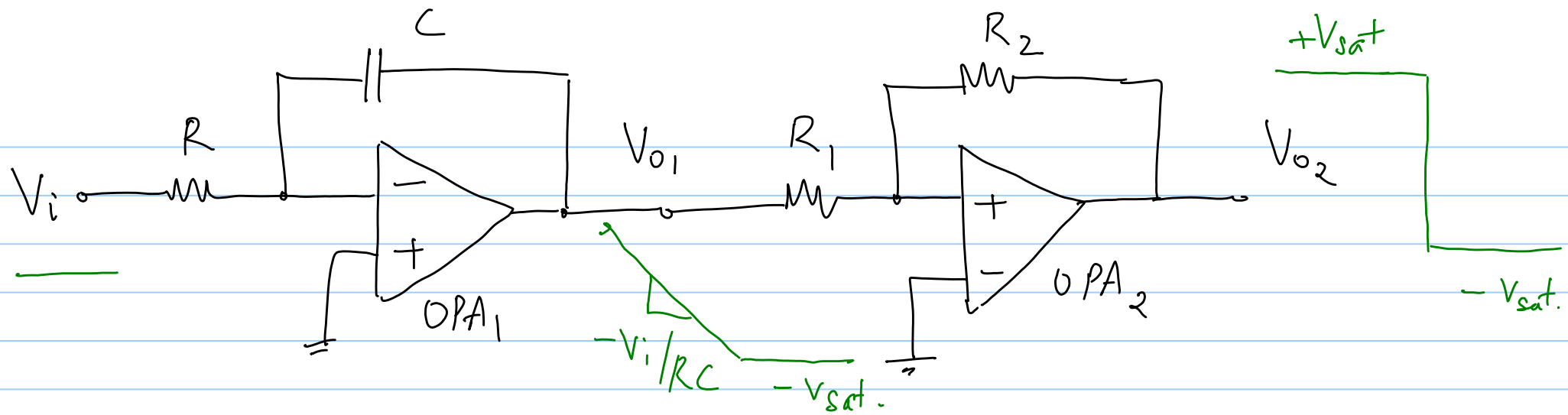


(II) is
Also a
Schmitt
trigger

$$V_y = \frac{R_1 V_o + R_2 V_i}{R_1 + R_2} = \frac{V_o + (R_2/R_1) V_i}{1 + R_2/R_1} = \frac{V_o + 3V_i}{4}$$

$$V_i = -15V \Rightarrow V_o = -15V$$





at $t=0$ $V_{o1} = \text{large \& +ve}$

