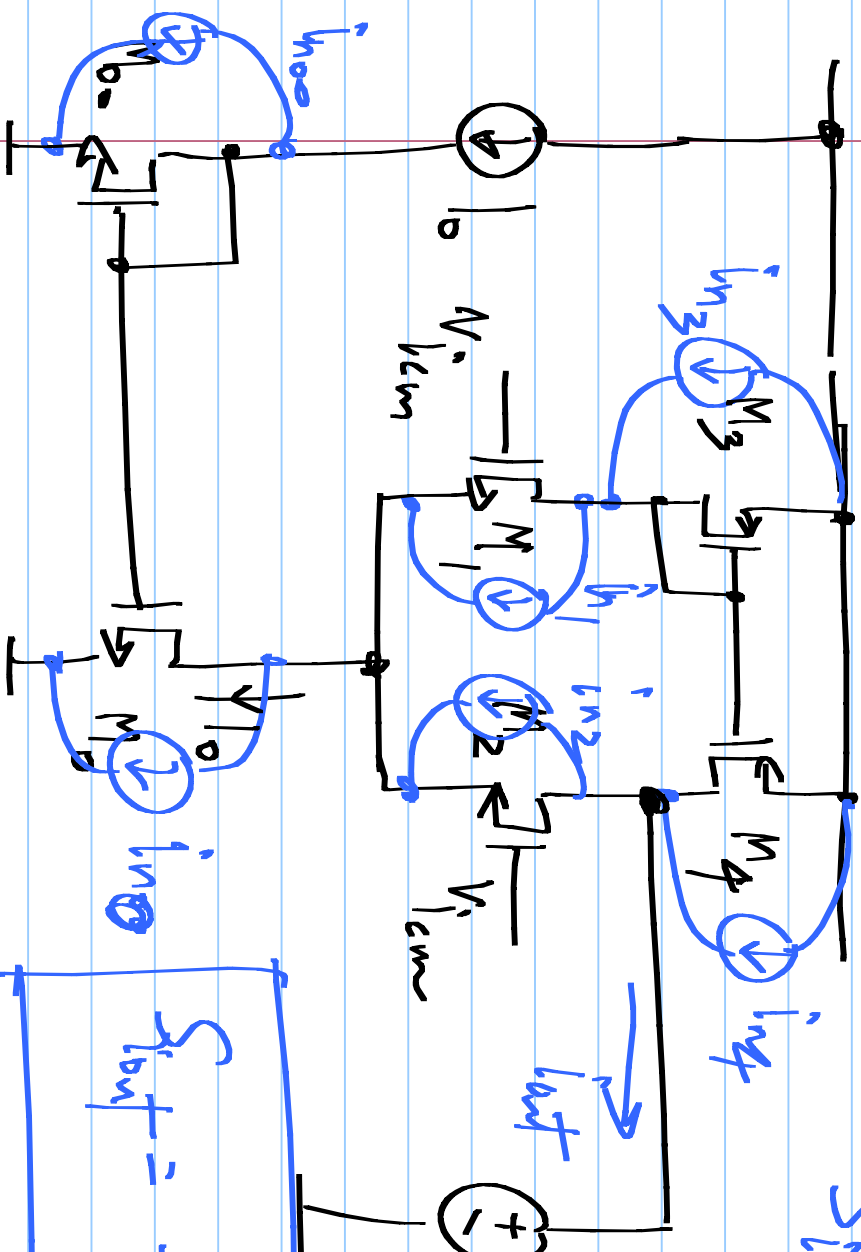


Lecture 15

17/2/2016

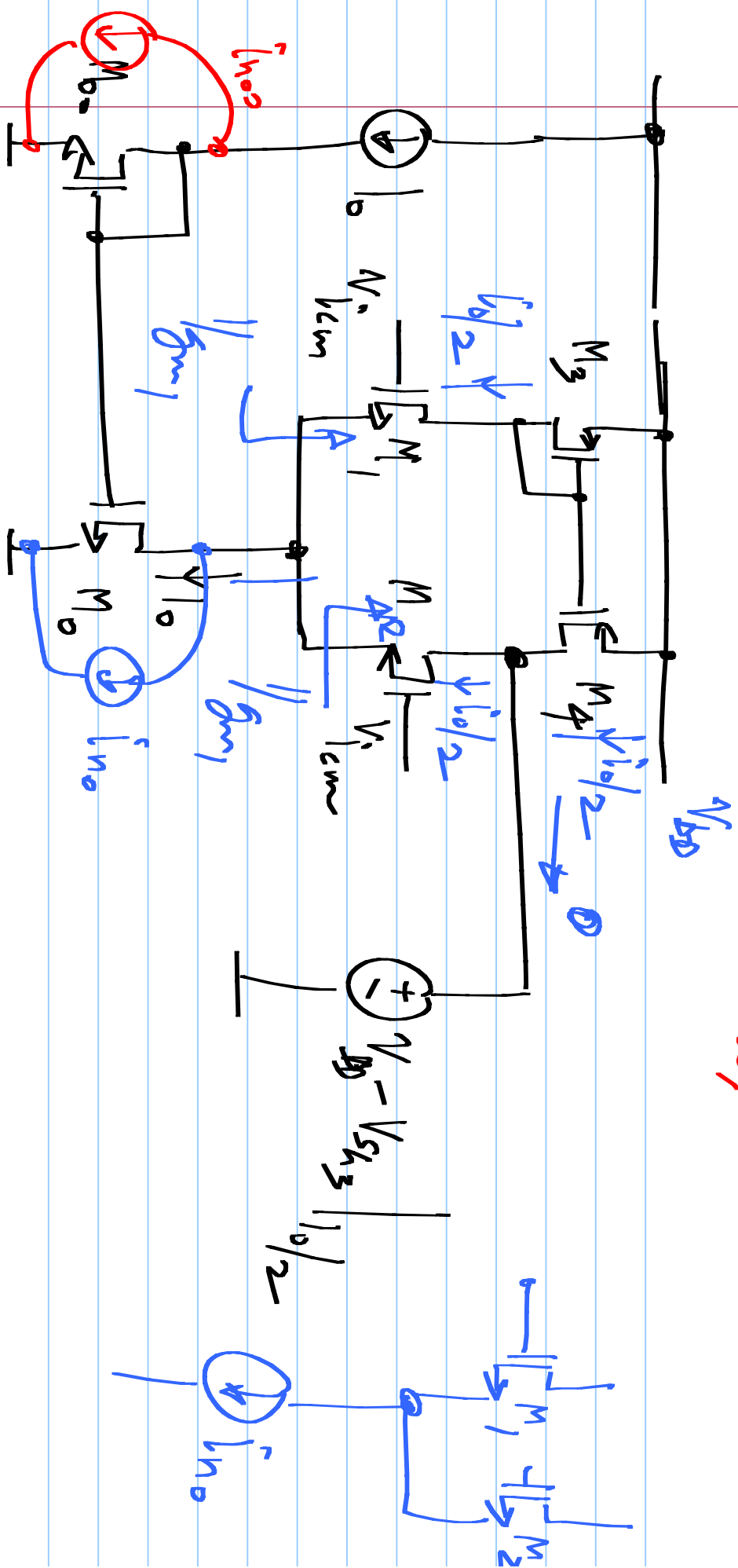
$$i'_{\text{leaf}} = i'_{n1} - i'_{n2} - i'_{n3} + i'_{n4}$$

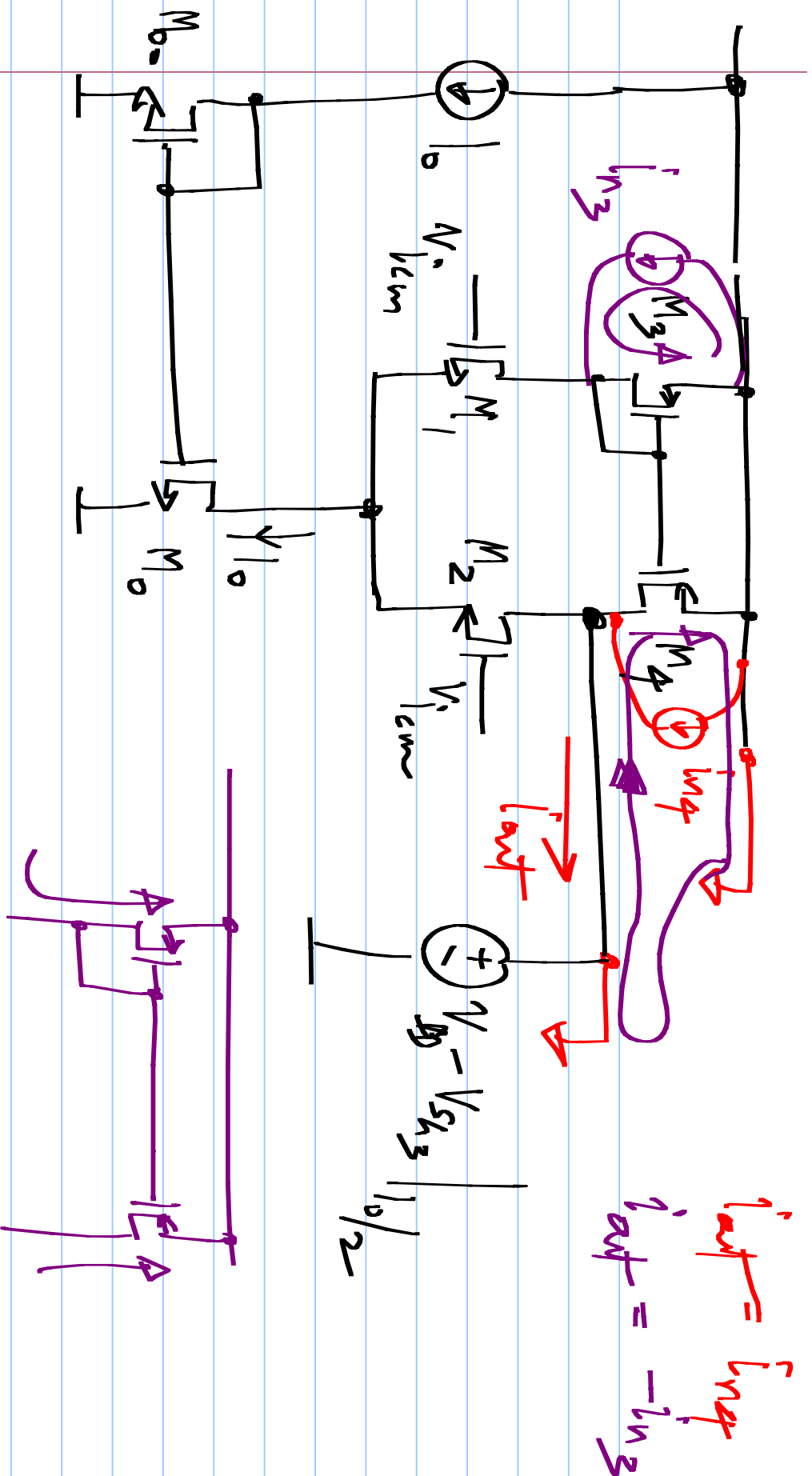
$$S'_{\text{leaf}} = \frac{8}{3} kT g_{m1} + \frac{8}{3} kT g_{m1} + \frac{8}{3} kT g_{m2} + \frac{8}{3} kT g_{m3}$$

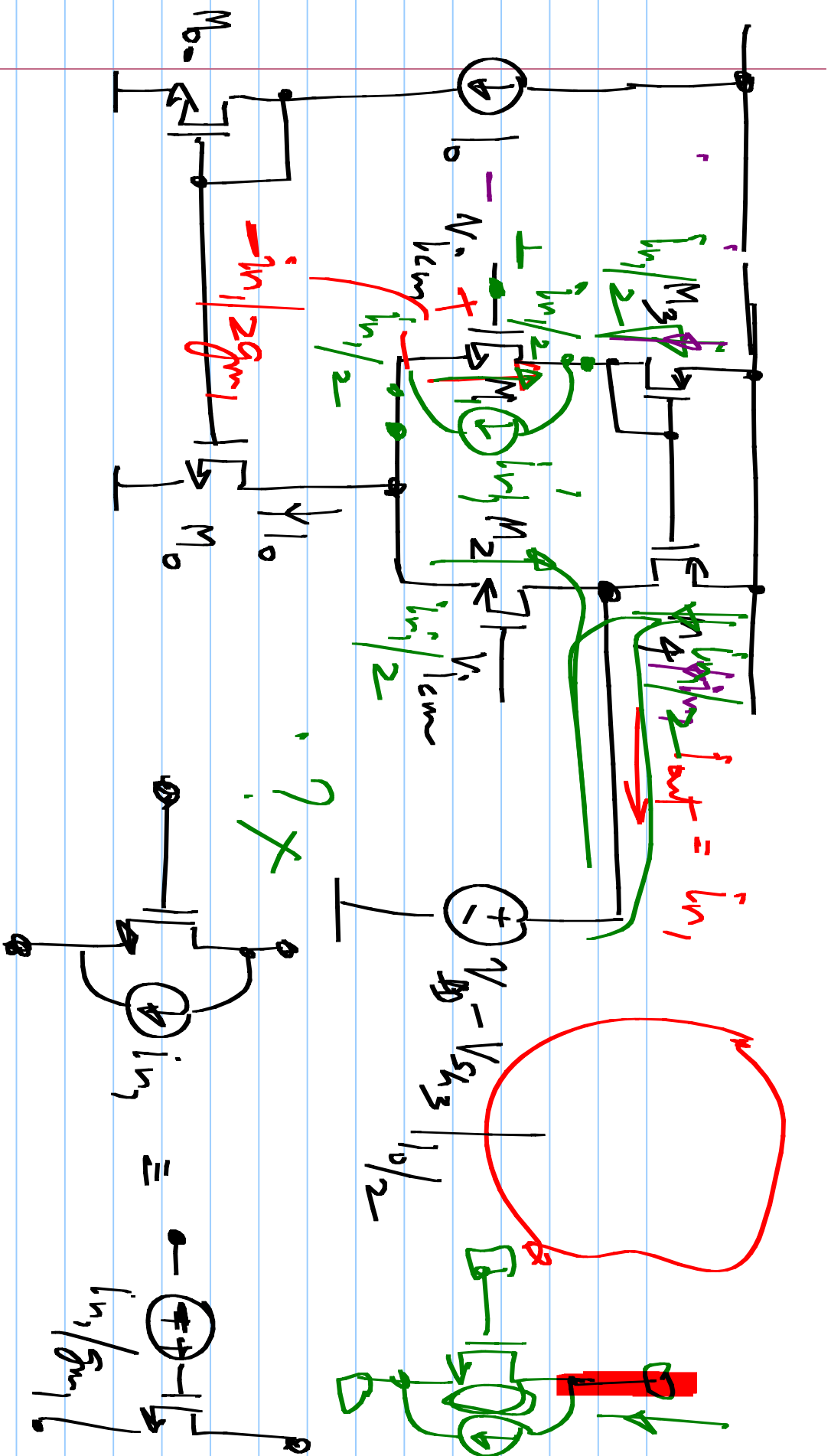


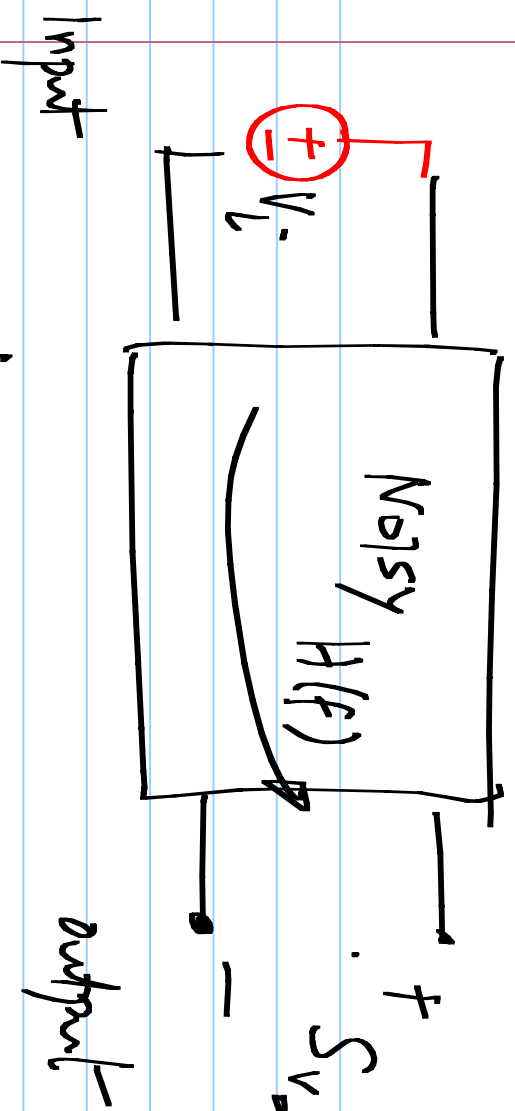
$$S'_{\text{leaf}} = \frac{16}{3} kT (g_{m1} + g_{m3})$$

i_{no}, i_{no}

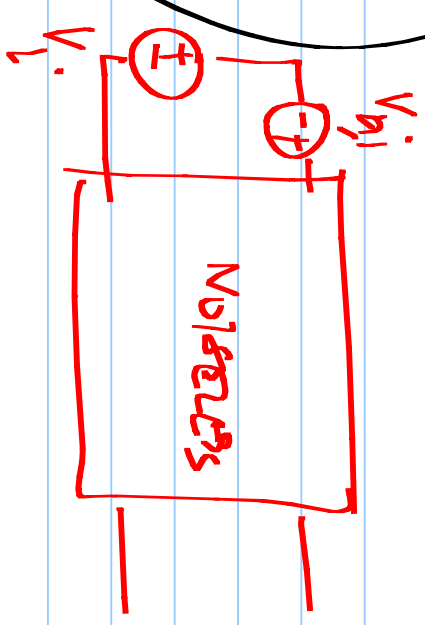
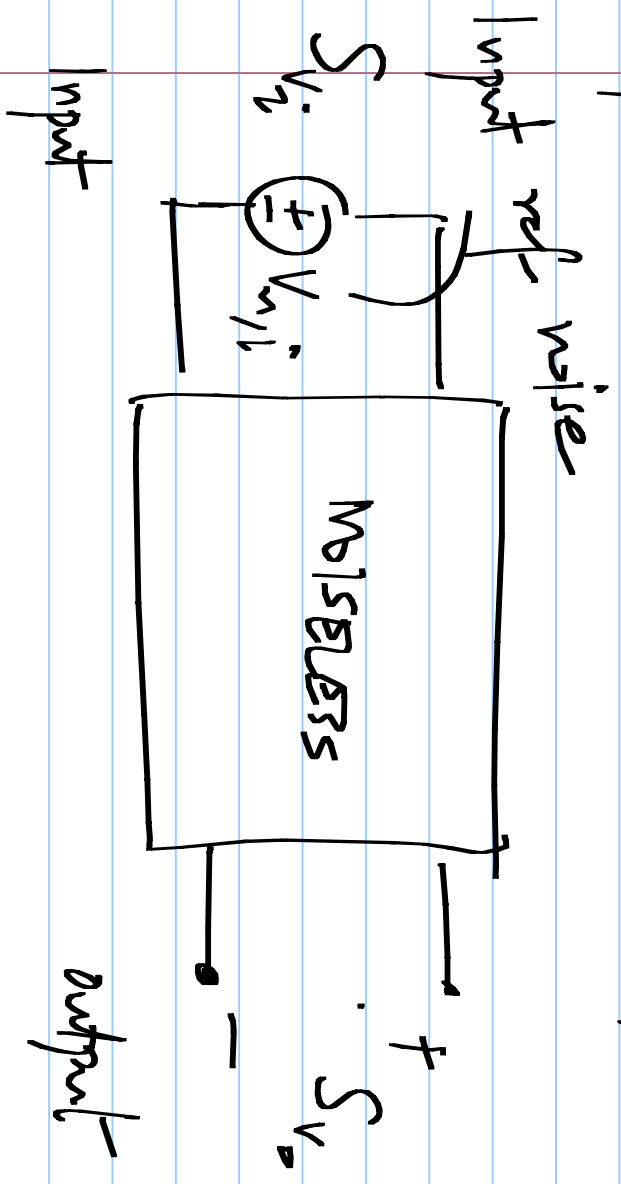


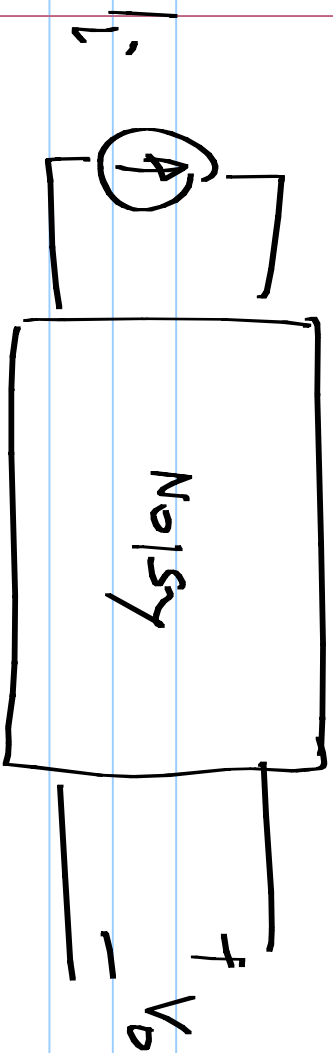




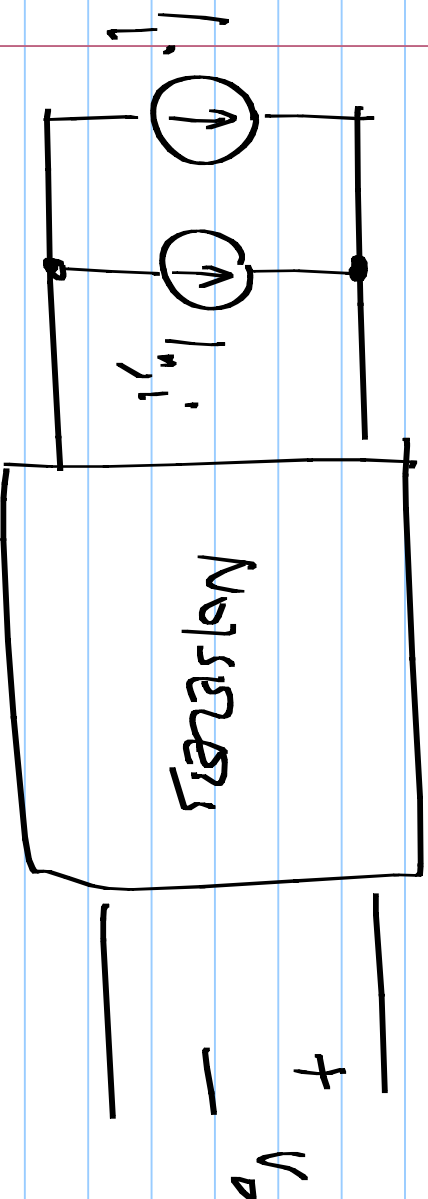


$$S_{V_i} = \frac{S_{V_o} \cdot (f)}{|1 + (f)|^2}$$





≡



$$q_m = \sqrt{2 \cdot \mu C_{ox} \frac{W}{L} \cdot I}$$

$$= \frac{2 I}{V_{GS} - V_T}$$

[REDACTED]

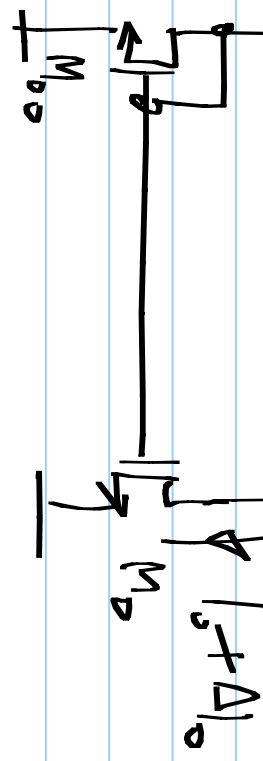
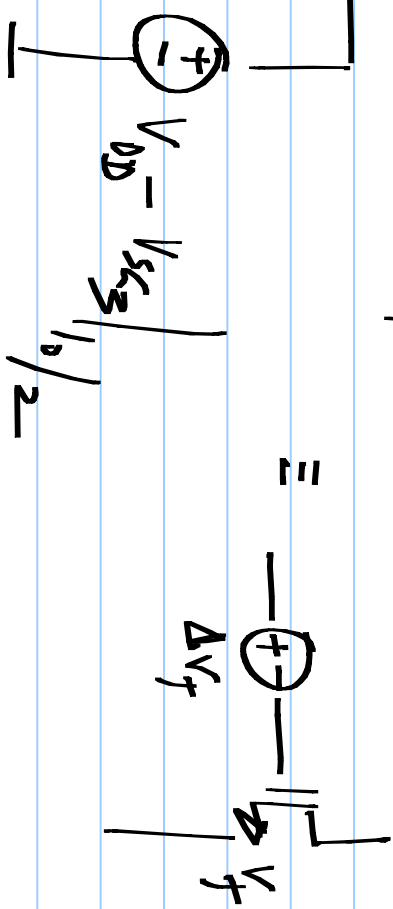


V_{DD}

$$V_{T1} - V_{T2} = \Delta V_{T2}$$

$$\Delta V_{T34}$$

i_{out}



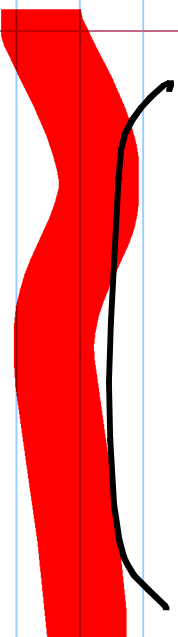
$$\frac{M_1 - M_2}{M_1 - M_2} : i_{out} = 0$$



$\sim$ $\sim$ $\dots$

$\underbrace{R_1 \quad R_2}_{}$

$$\sigma^2 \left(\frac{R_k - R_{k+1}}{R} \right)$$



$\swarrow 2x$

$\sim$ $R_{1000000}$ R

$$\sigma^2 \left(\frac{R_k - R}{R} \right)$$

