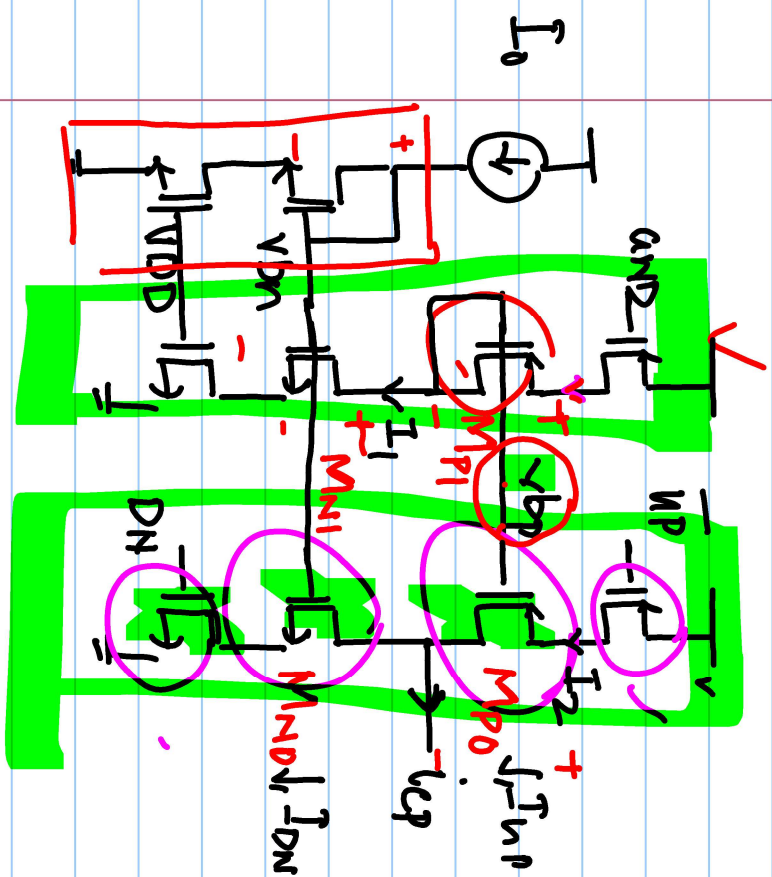


# Lecture # 40



$$I_2 = 100 I_1 = 100 I_0$$

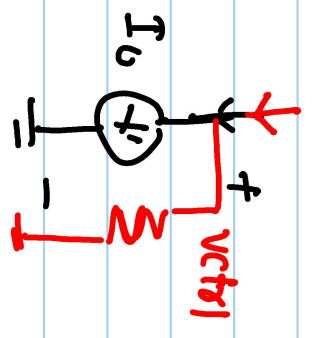
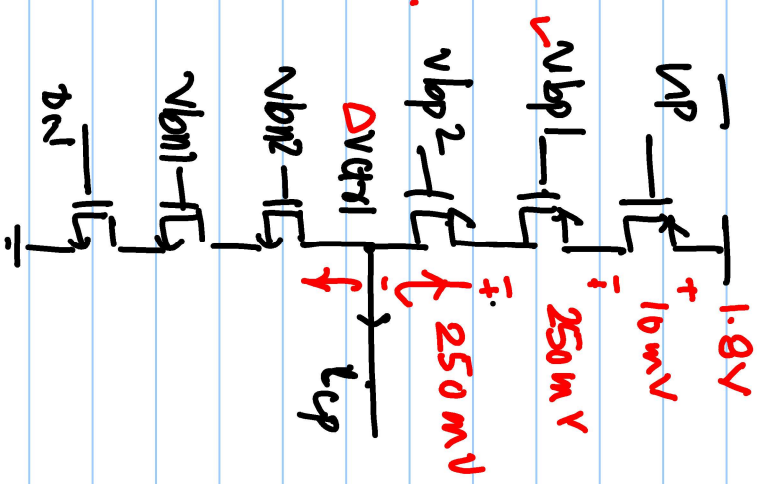
$$I_2 \neq \mu_n \cdot I_1 \neq \beta \cdot I_0$$

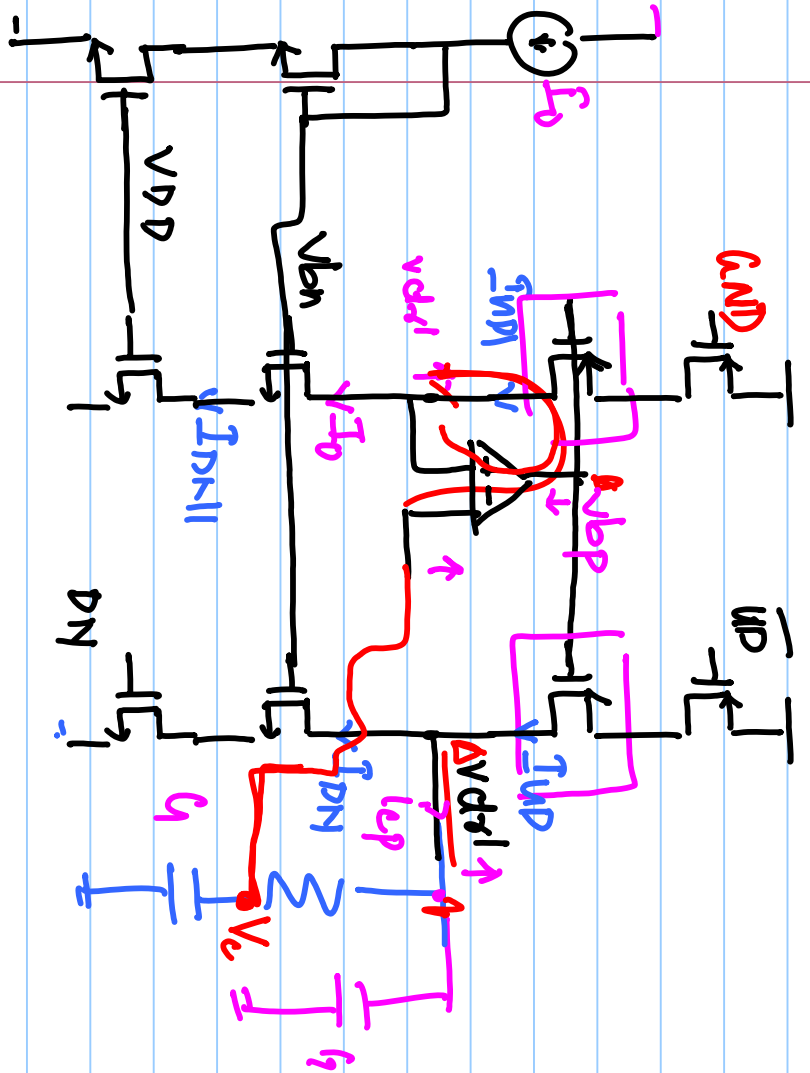
Static mismatch ✓  
Dynamic mismatch.

$$I = \frac{\mu_{\text{ox}} W}{2} (V_{\text{gs}} - V_{\text{th}})^2$$

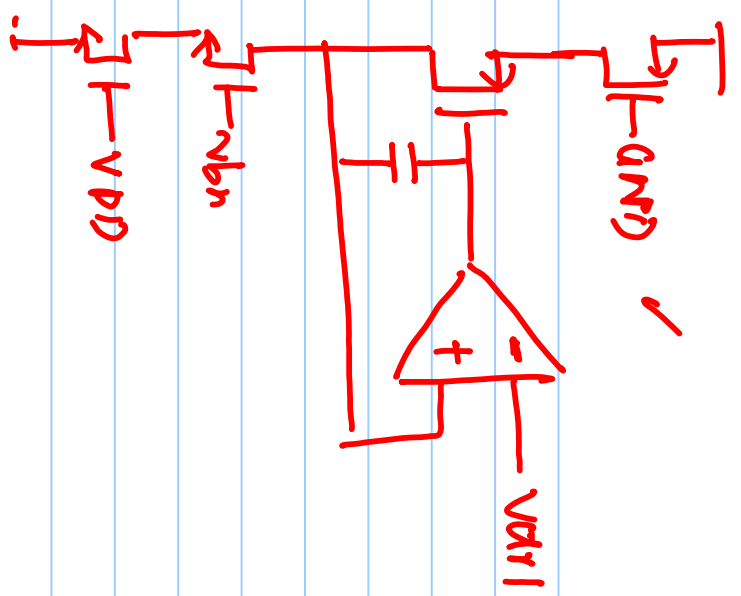
$$V_{\text{th}} = \sqrt{\frac{I}{\mu_{\text{ox}} W}} \left( V_{\text{gs}} - \sqrt{\frac{I}{\mu_{\text{ox}} W}} \right)$$

$$\sigma^2(V_{\text{th}}) = \frac{A_{V_{\text{th}}2}}{A_{V_{\text{th}}1}^2} \approx 5 \text{ mV } \mu\text{m}$$



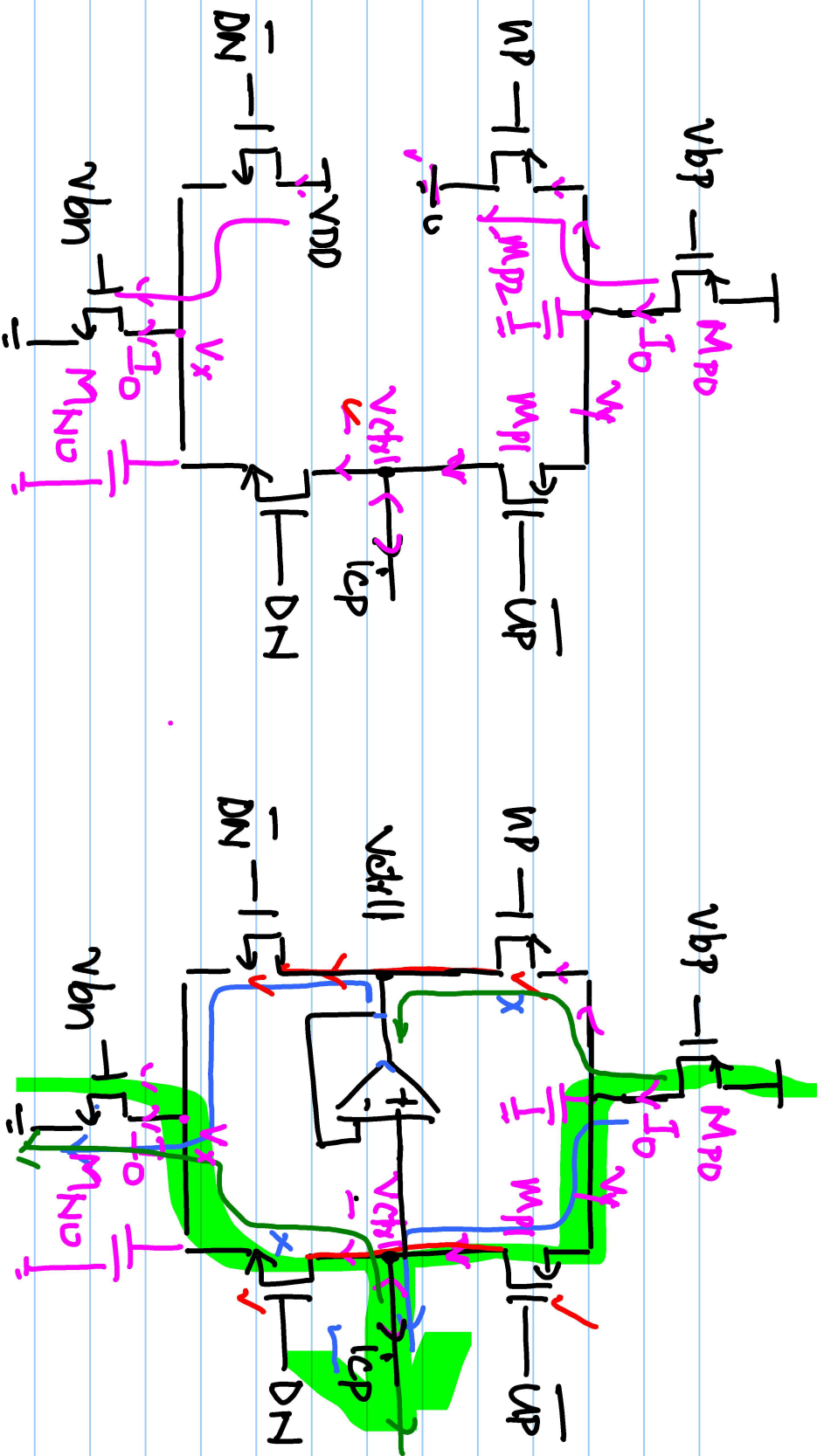


$$I_{D1} = I_{DNI}$$



$I_{D1} = I_{DNI}$





$$\overline{MP} = \overline{DN} = 0$$

$$IIP = \overline{DN} = 1$$

$$\checkmark \overline{MP} = 0, \overline{DN} = 1 \quad \#1 \checkmark$$

$$\checkmark \overline{MP} = 0, \overline{DN} = 1 \quad \#2 \checkmark$$

