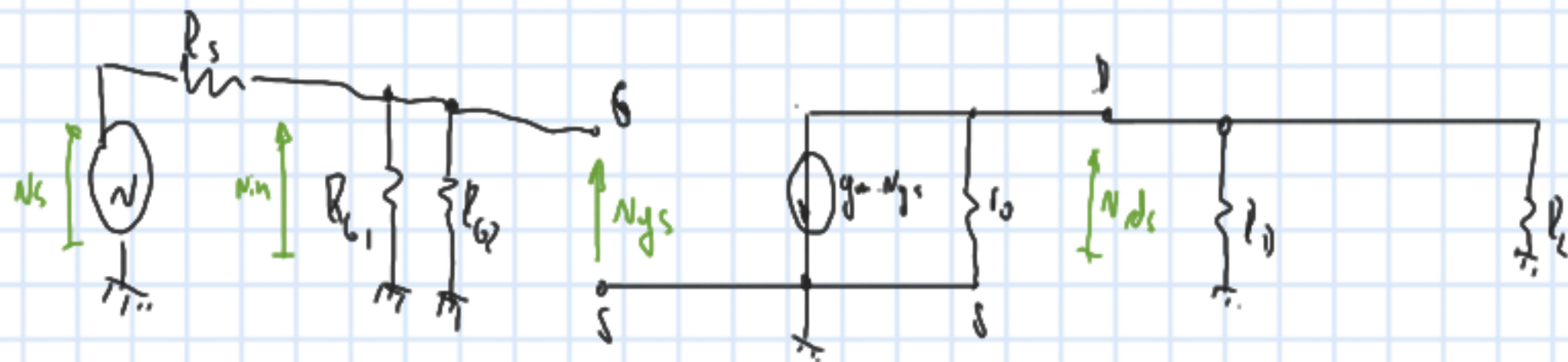
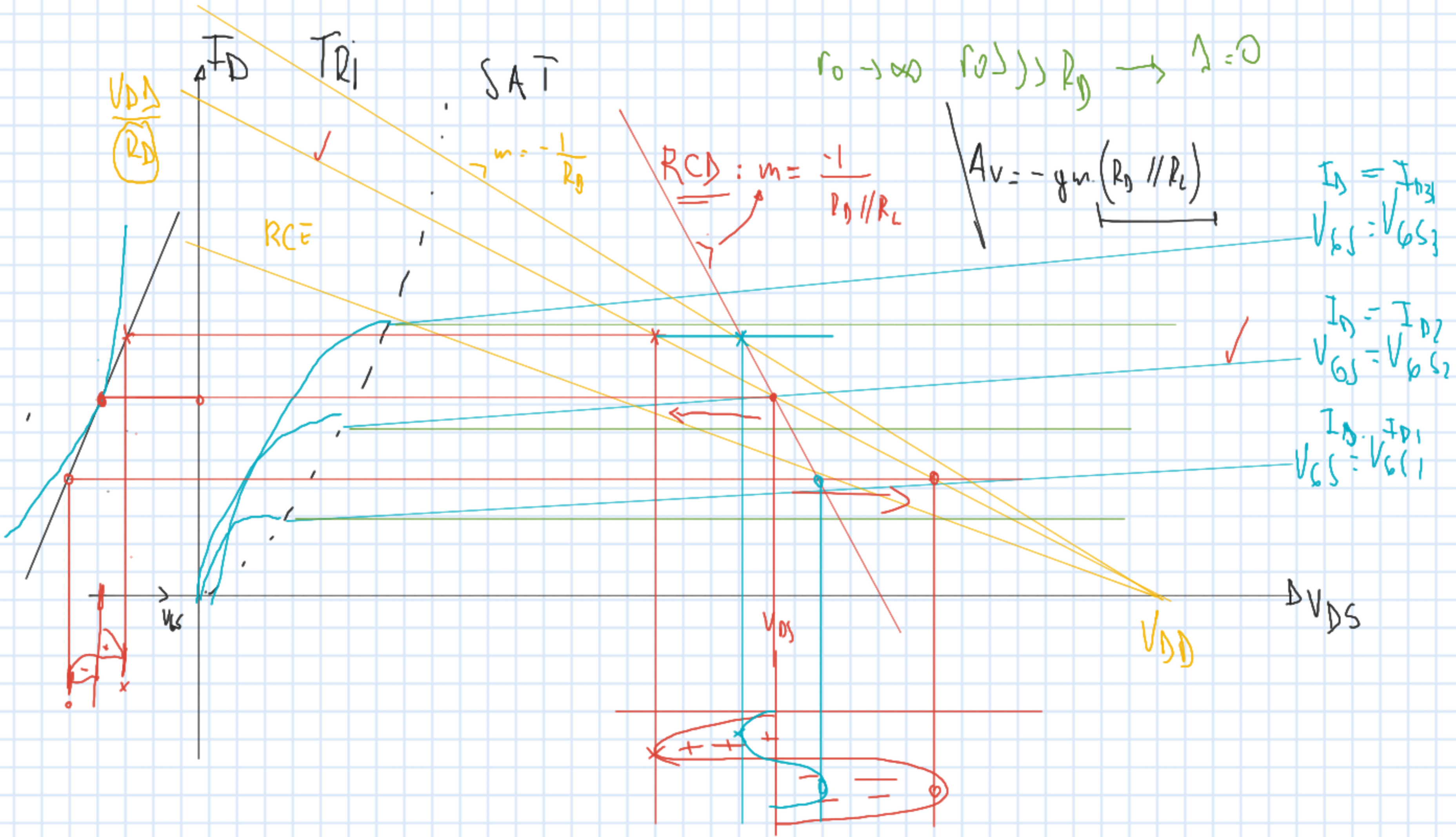
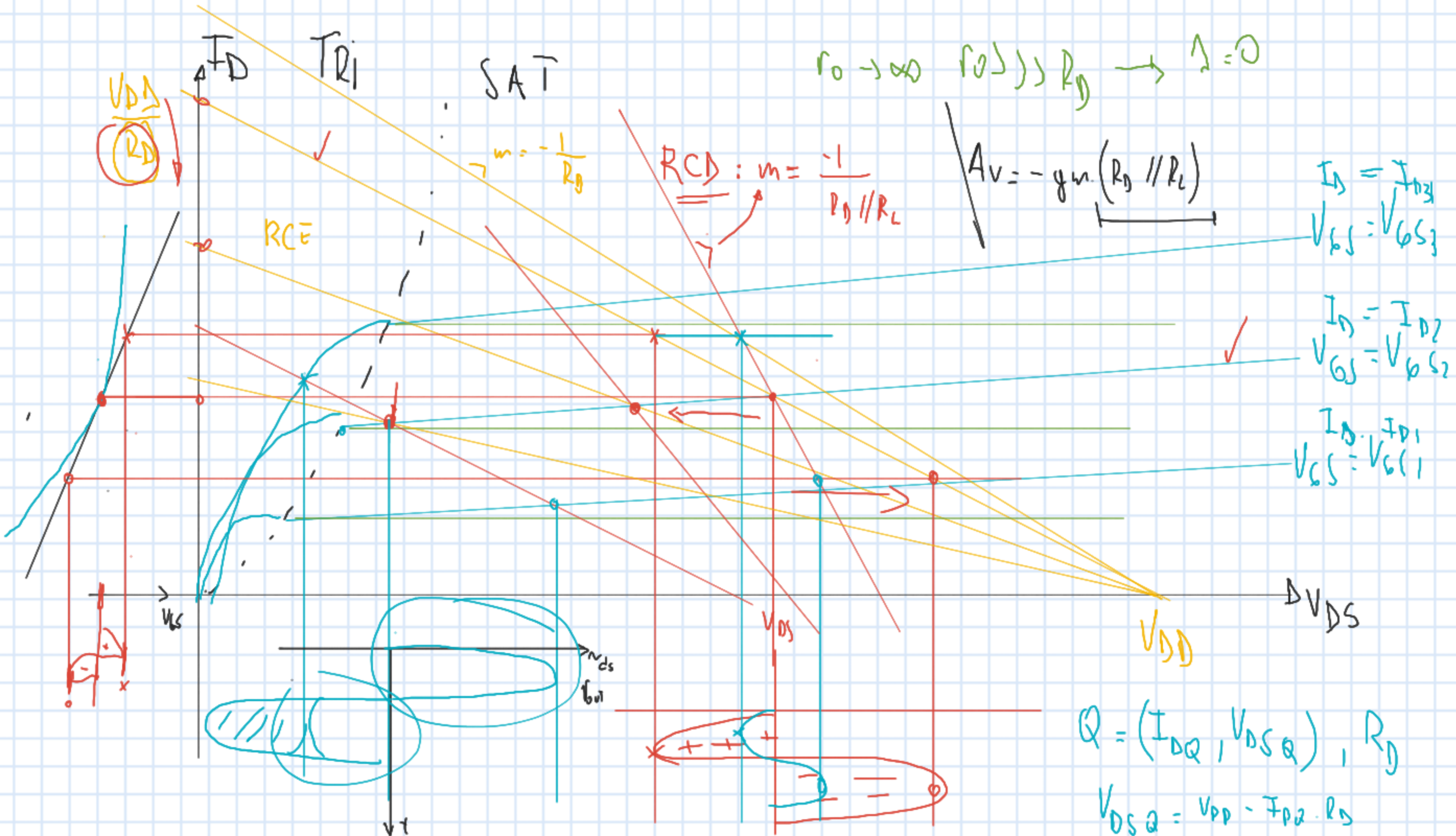


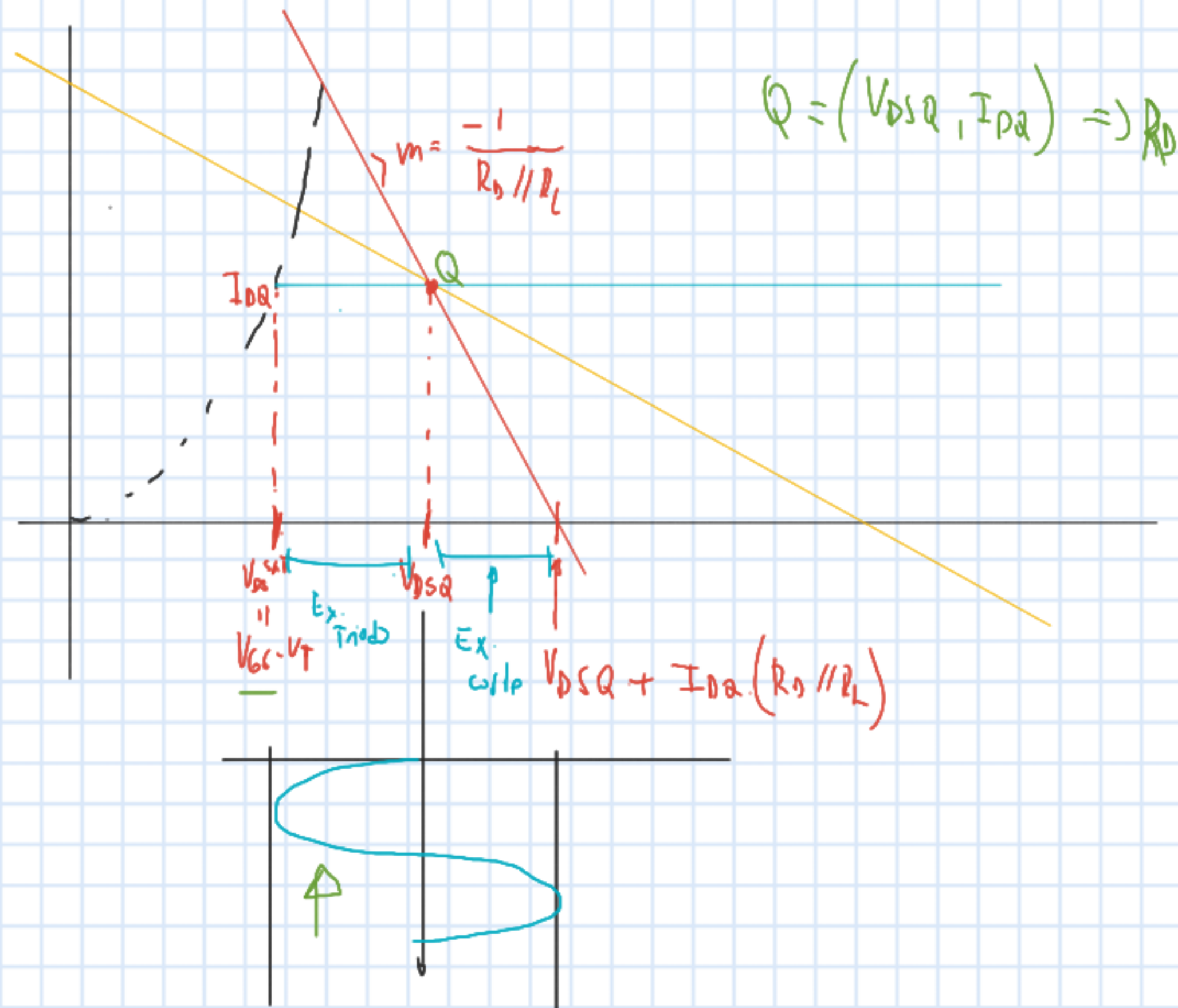
$$V_{GS} : \hat{N}_{gs} = 100 \mu V \times$$



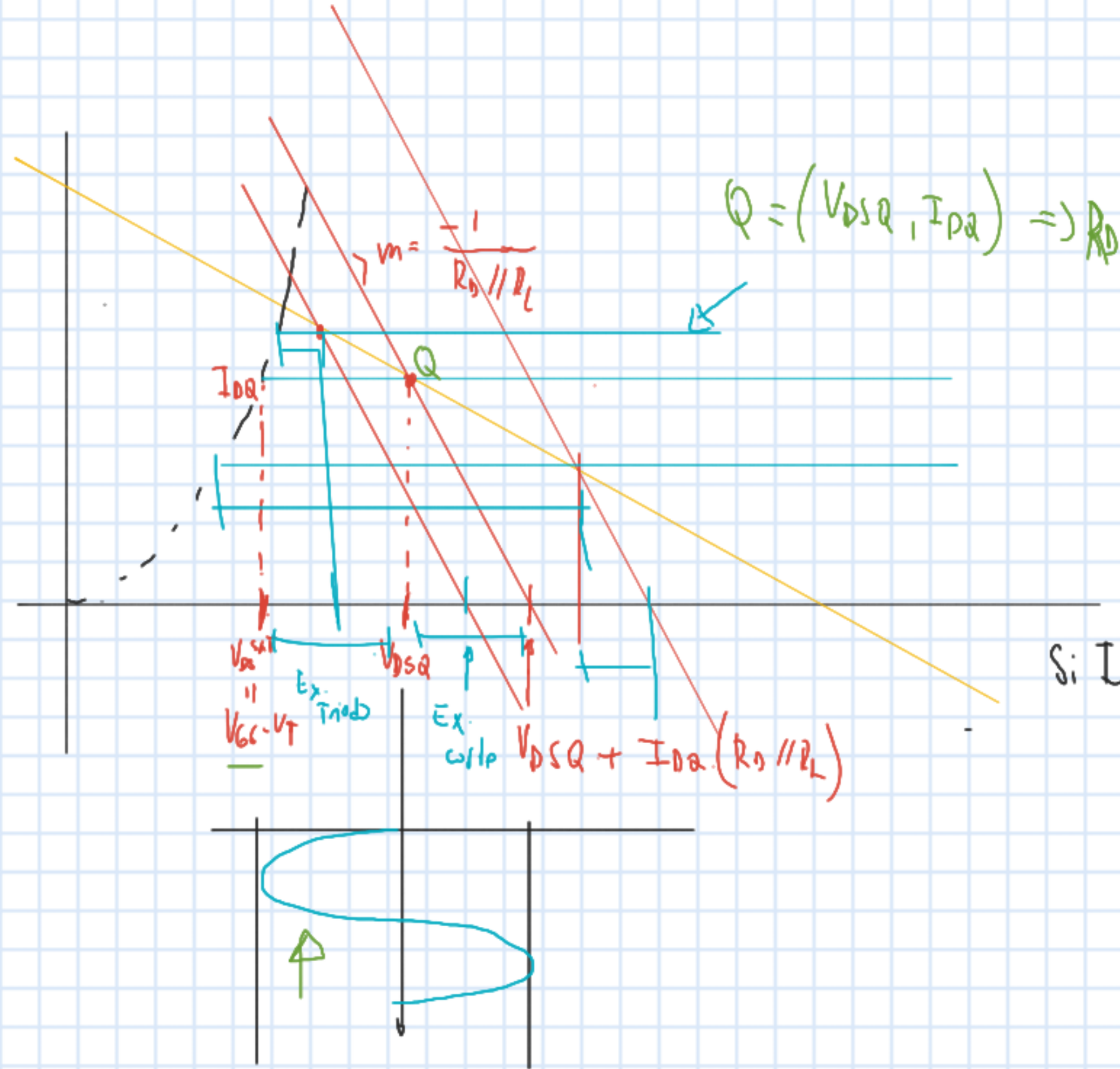
$$I_D \rightarrow V_{GS} \rightarrow (V_{GS} - V_T) \frac{1}{5} = \hat{N}_{gs} \mu V \times = 50 \mu V$$











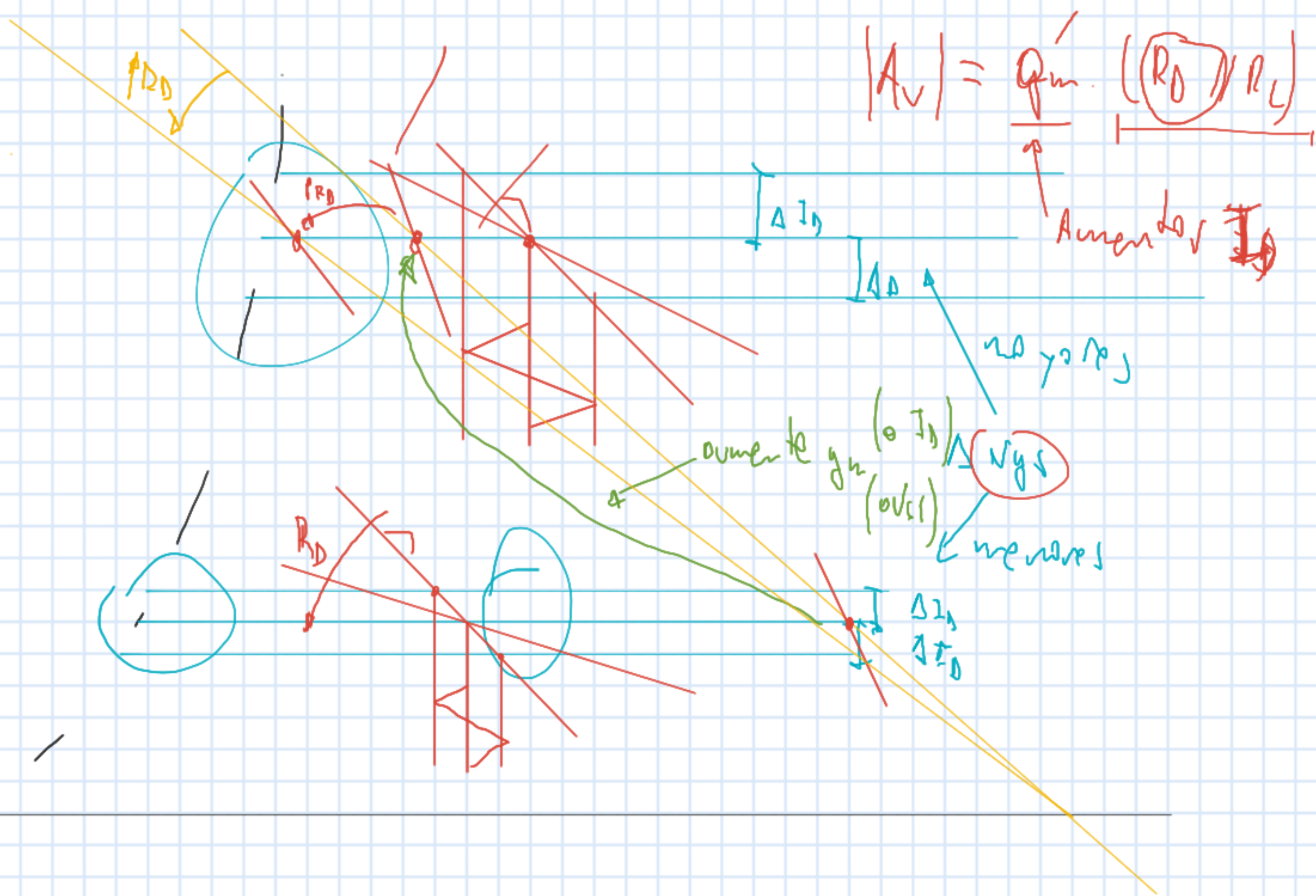
$$A_v = -g_m (R_D // R_L)$$

$$|A_v| = g_m (R_D // R_L)$$

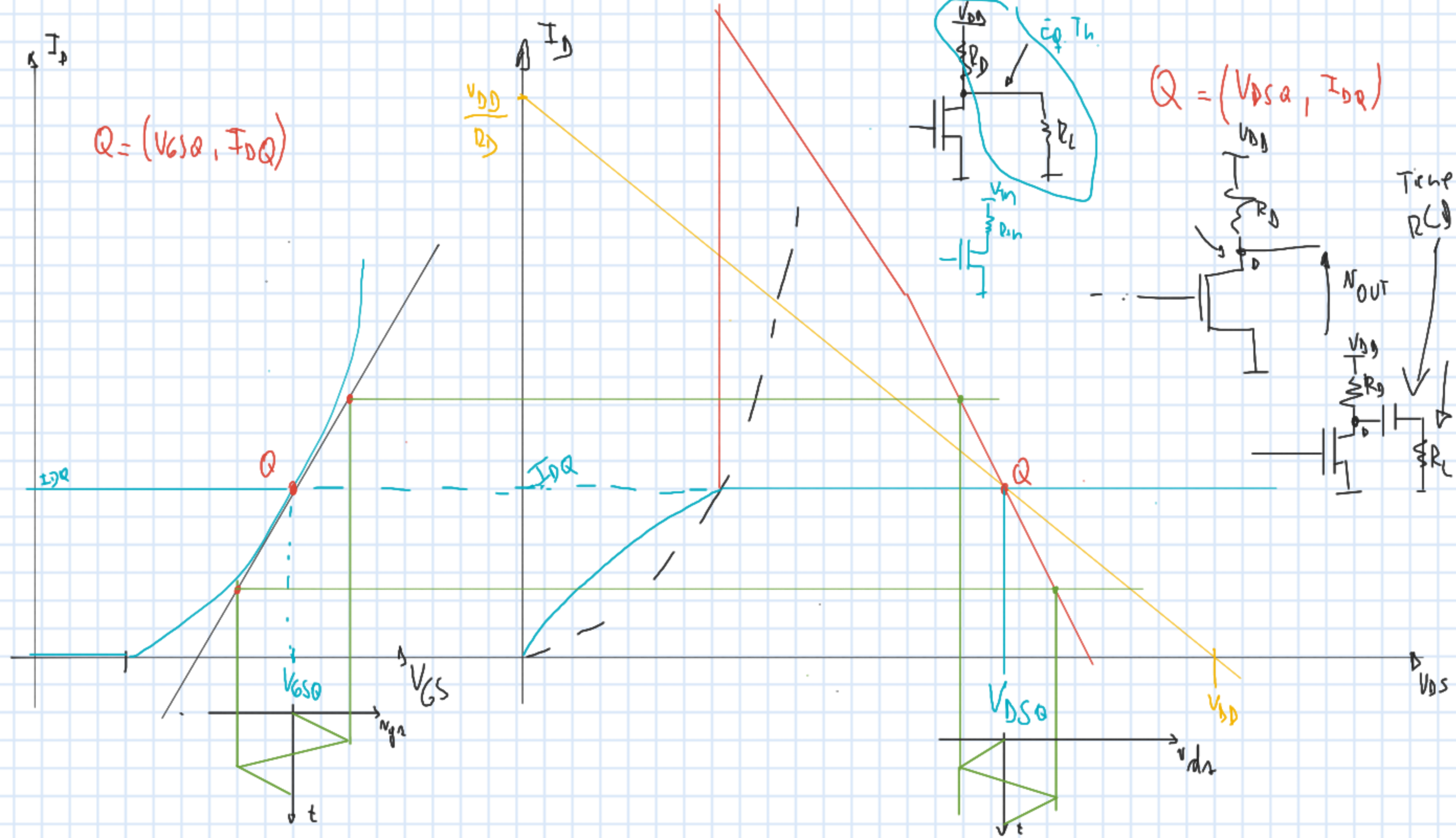
$$= 2\sqrt{I_D k} \quad \lambda = 0$$

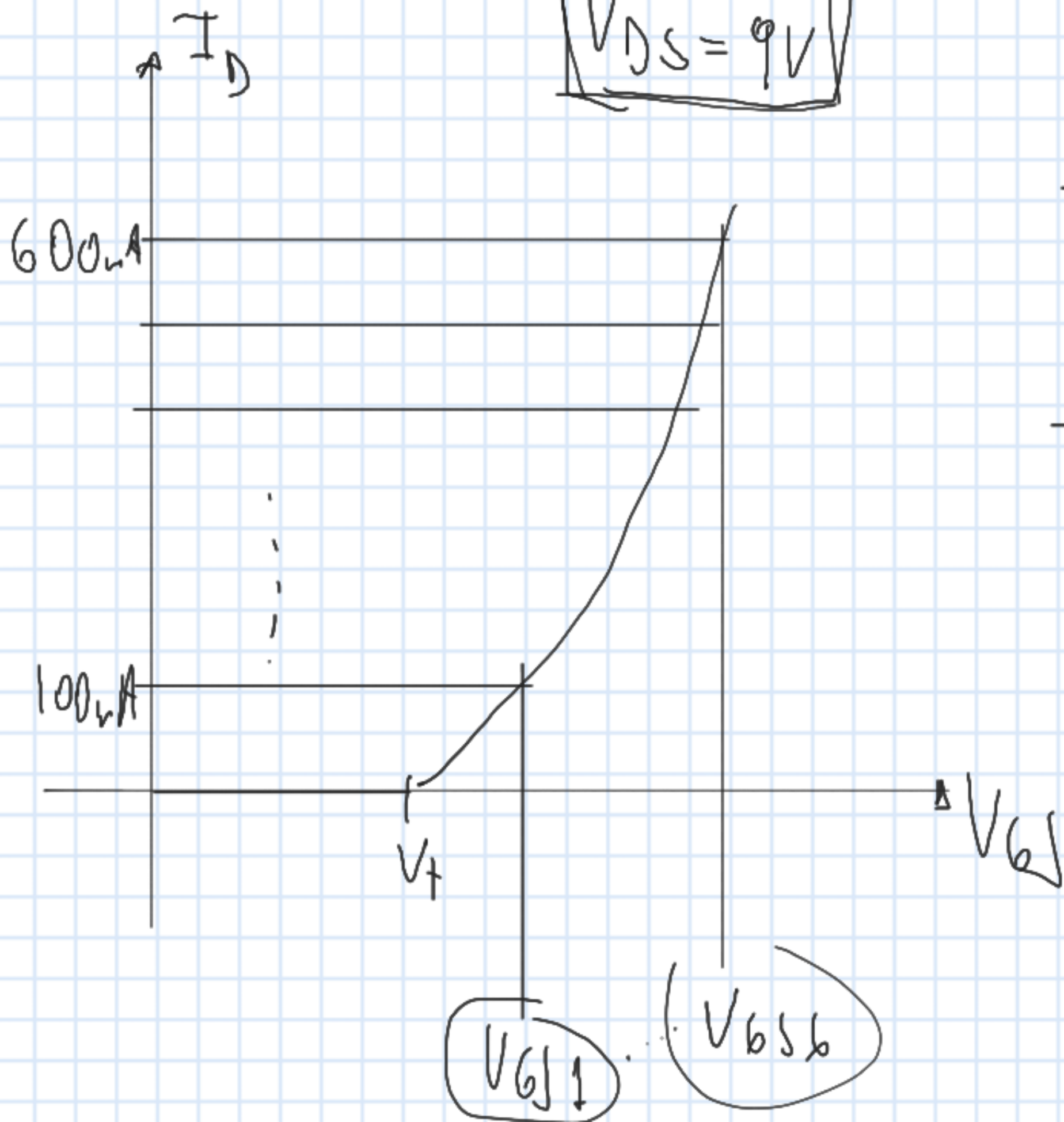
$$\hat{N}_{gs}^{max} = 0,2 \cdot (V_{G1} - V_t)$$

$$\hat{N}_{out}^{max} = |A_v| \cdot \hat{N}_{gs}^{max}$$

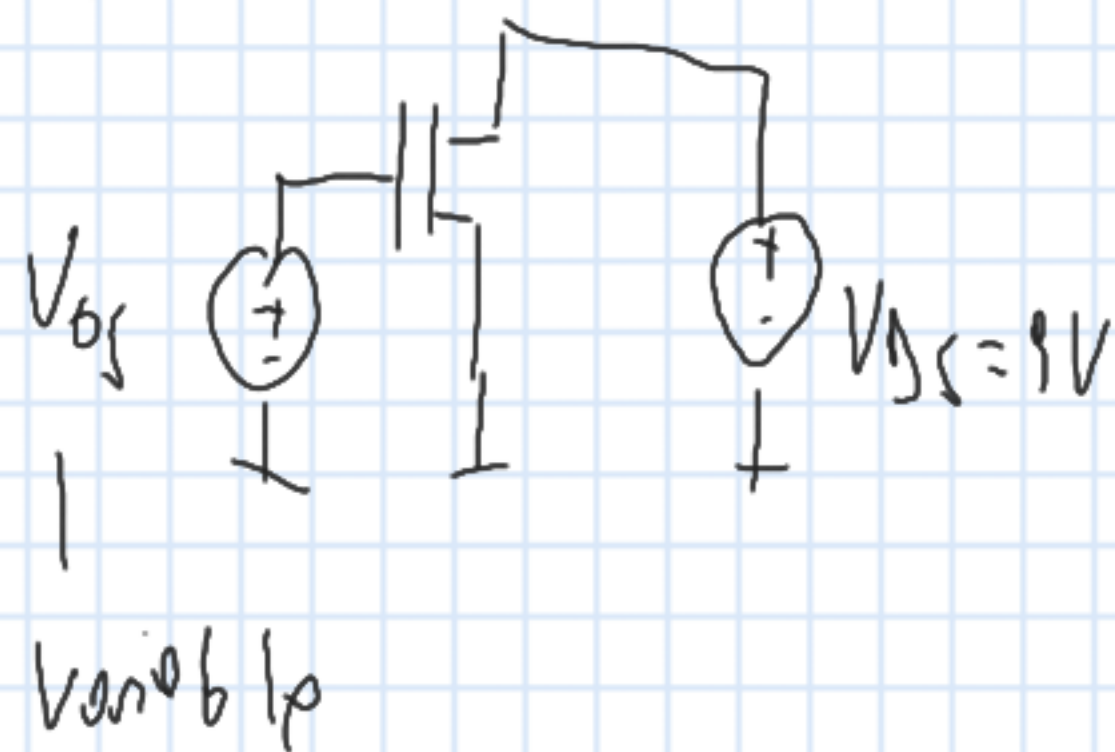


$$Q = (V_{GSQ}, I_{DQ})$$





$V_{GS1}$   
 $V_{GS6}$

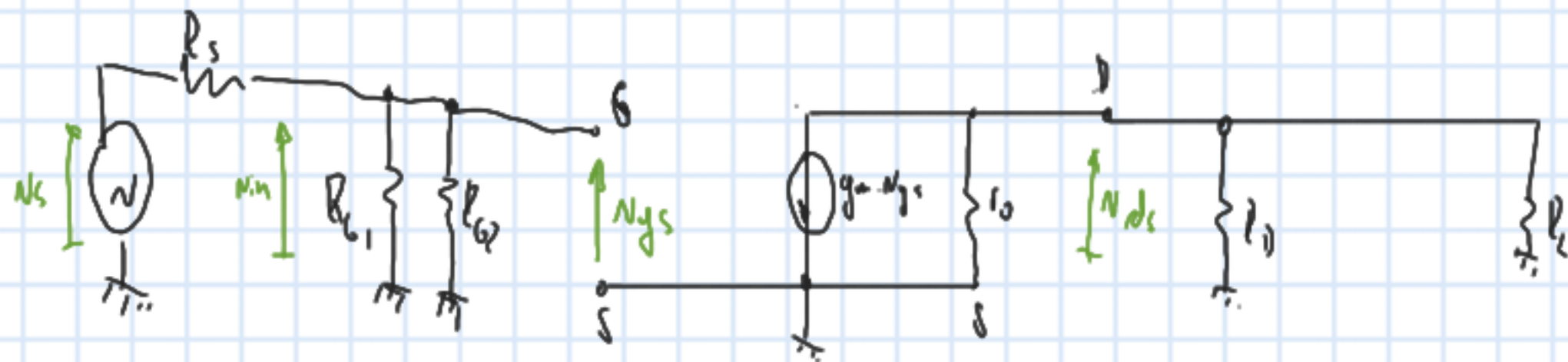




$$\hat{N}_{gs} = \hat{N}_{gs}^{max} = 0,2 \cdot (V_{GS} - V_T)$$

$$\hat{N}_{ds} = g_m \cdot \hat{N}_{gs} \cdot (r_o \parallel R_o \parallel R_L)$$

$$V_{GS} : \hat{v}_{gs} = 100 \mu V \times$$



$$I_D \rightarrow V_{GS} \rightarrow (V_{GS} - V_T) \frac{1}{5} = \hat{v}_{gs}^{max} = 50 \mu V$$

$$\hat{v}_{gs} = \hat{v}_{gs}^{max} = 0,2 \cdot \underline{V_{GS} - V_T}$$

$$\hat{v}_{ds} = g_m \cdot \hat{v}_{gs} (r_o \parallel R_D \parallel R_L) = \underline{\hat{v}_{gs} |A_v|}$$

$$V_{DSQ} - V_{DSQ}' = \underline{V_{DD} - V_{GS} + V_T} > \hat{v}_{ds} = \hat{v}_{gs} |A_v| = 0,2 (V_{GS} - V_T) \cdot |A_v| = \underline{0,2 (V_{GS} - V_T) \cdot g_m (R_D \parallel R_L)}$$