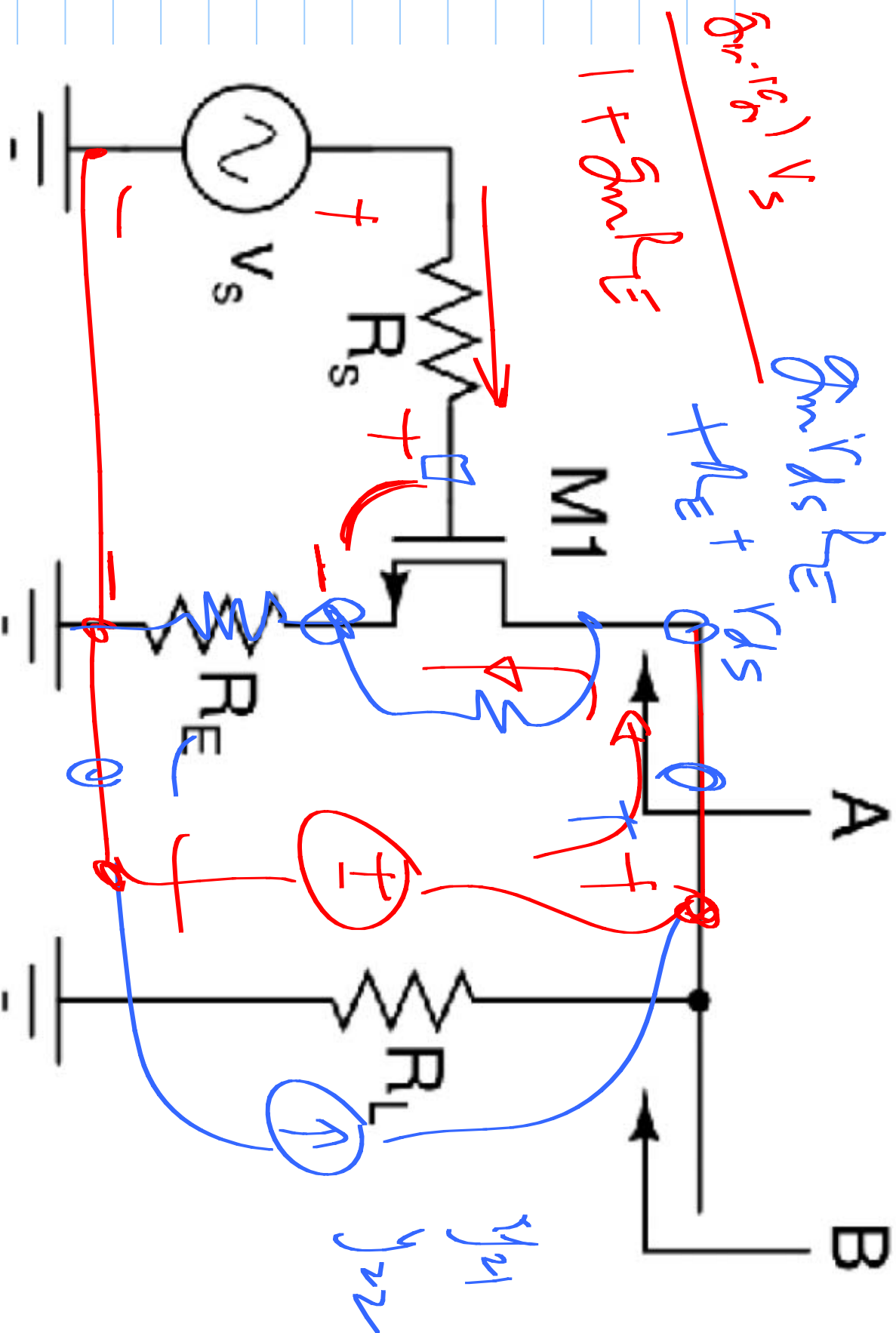




2N7000

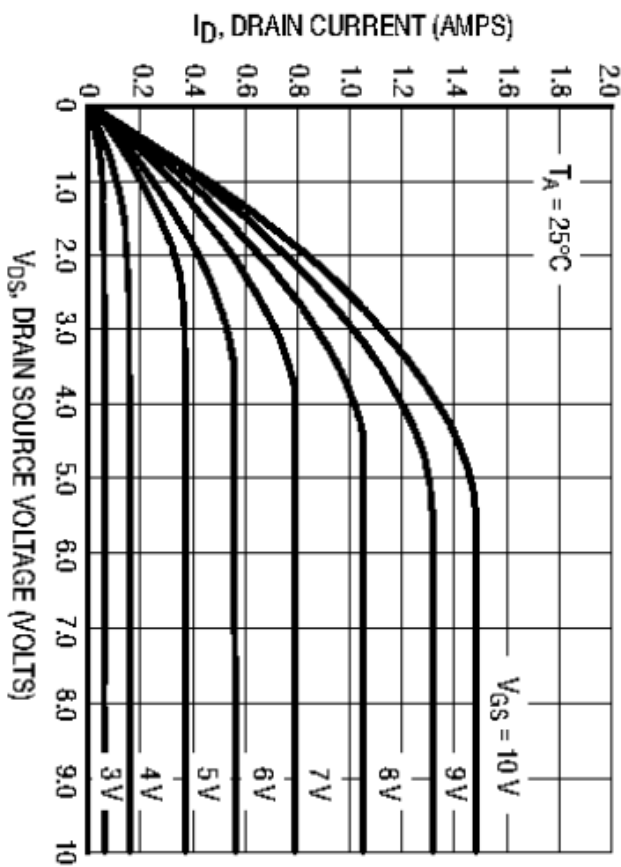


Figure 1. Ohmic Region

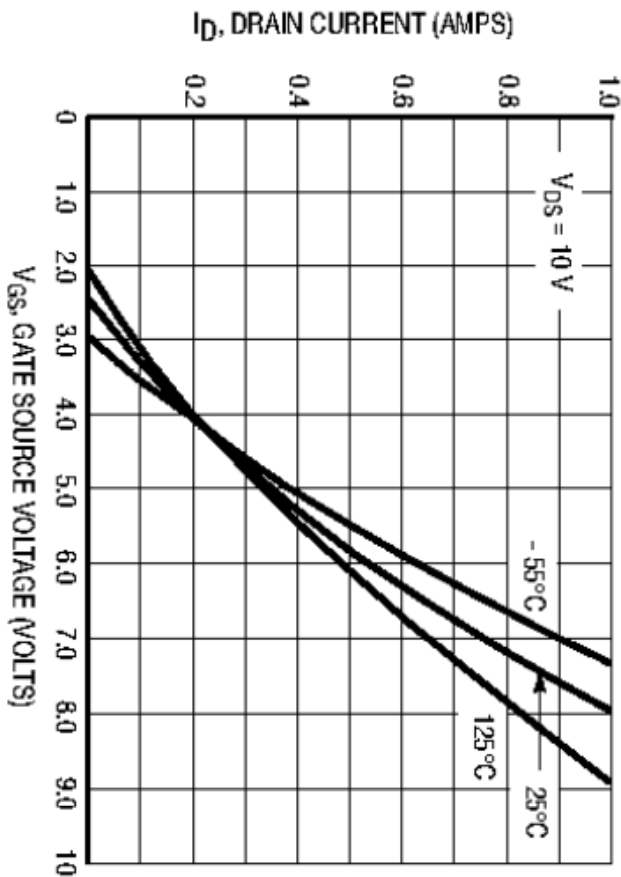
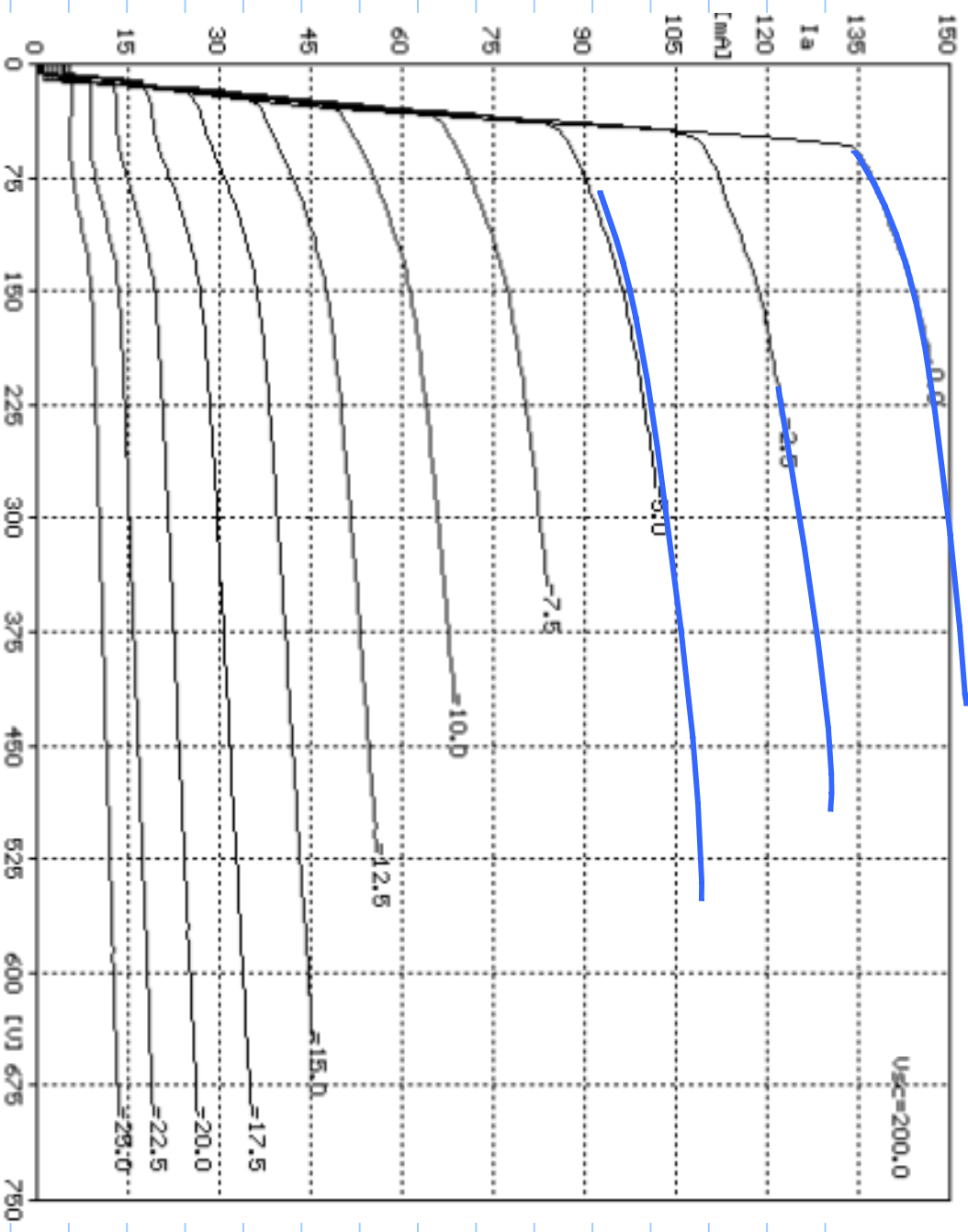


Figure 2. Transfer Characteristics

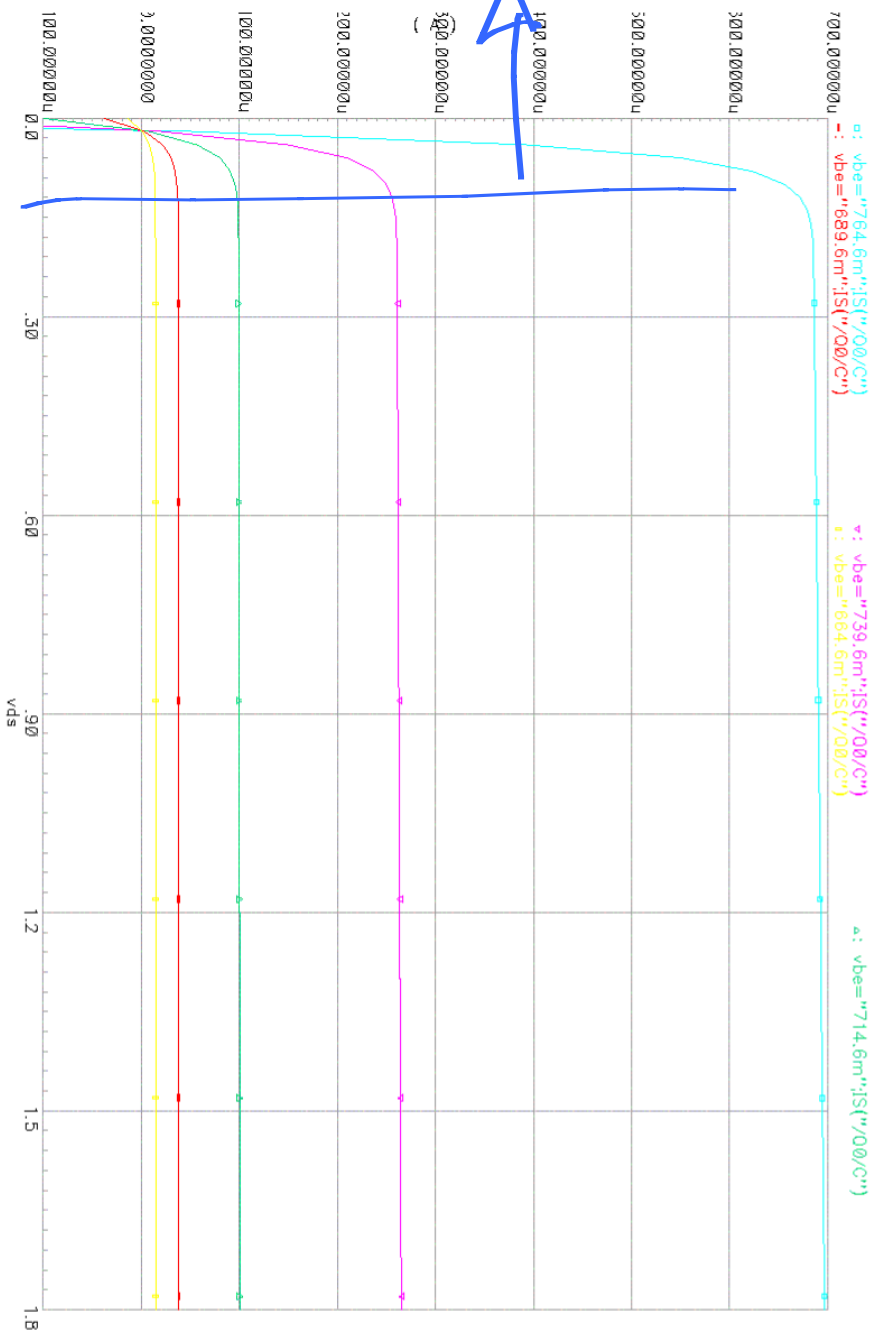
I_a

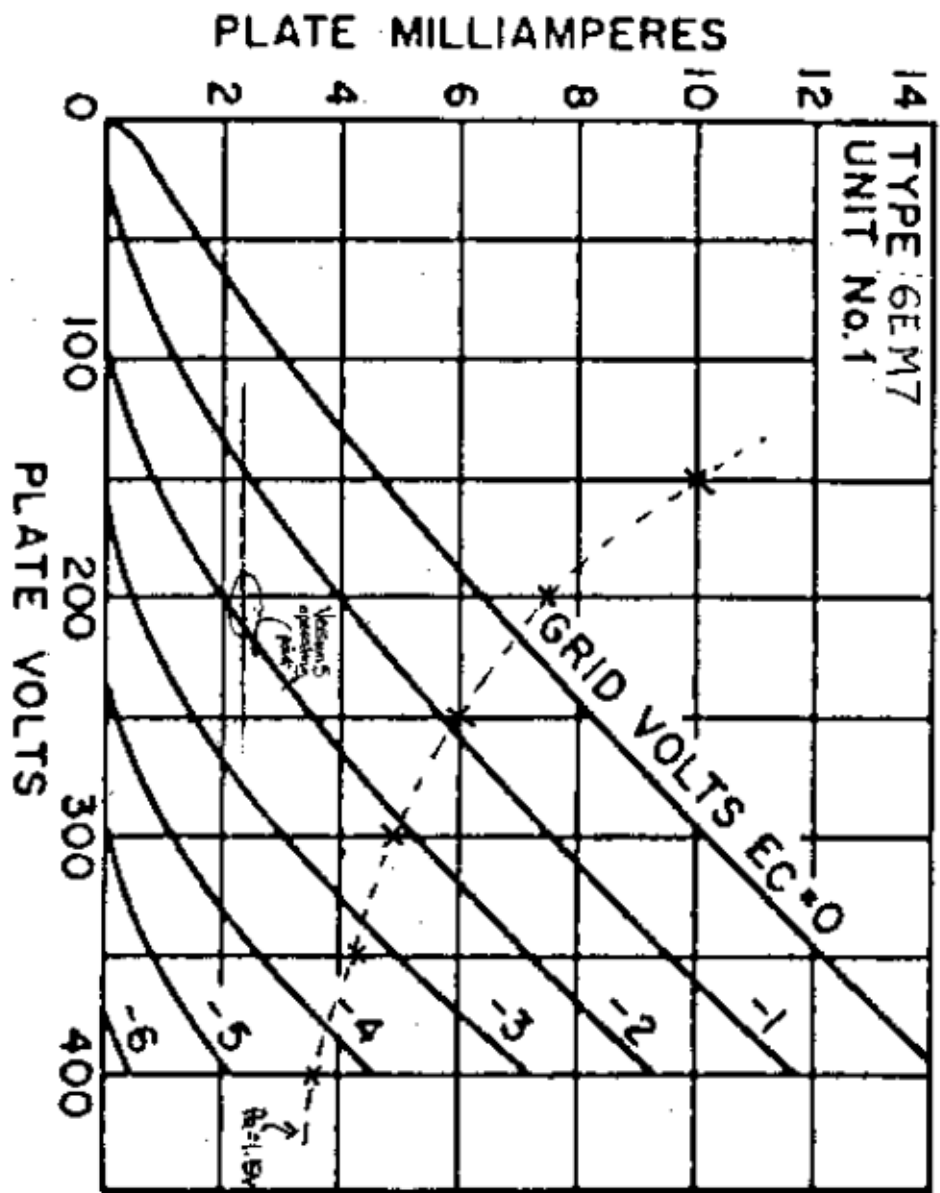


V_{gs}

NPN transistor output characteristics

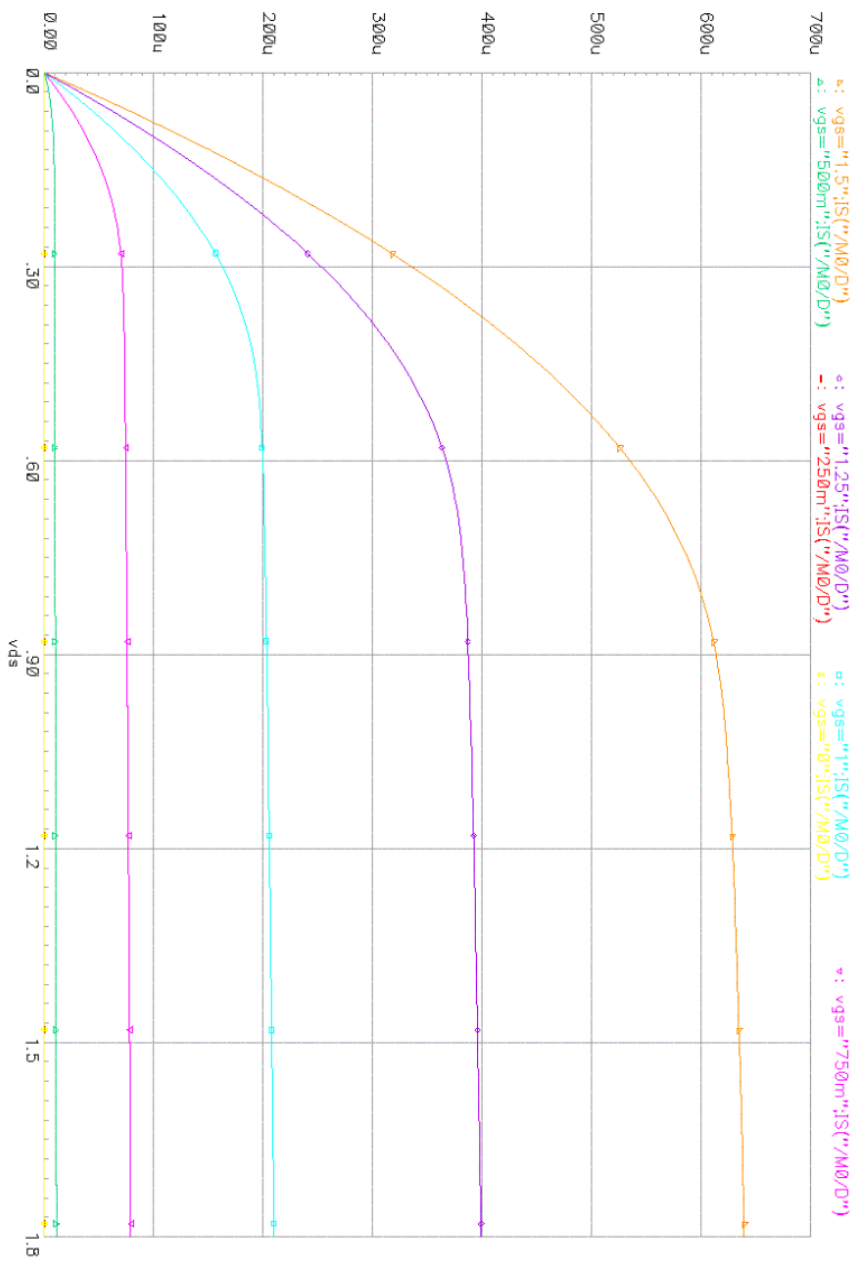
DC Response





MOS output characteristics: $W=10\mu$, $L=2\mu$

DC Response

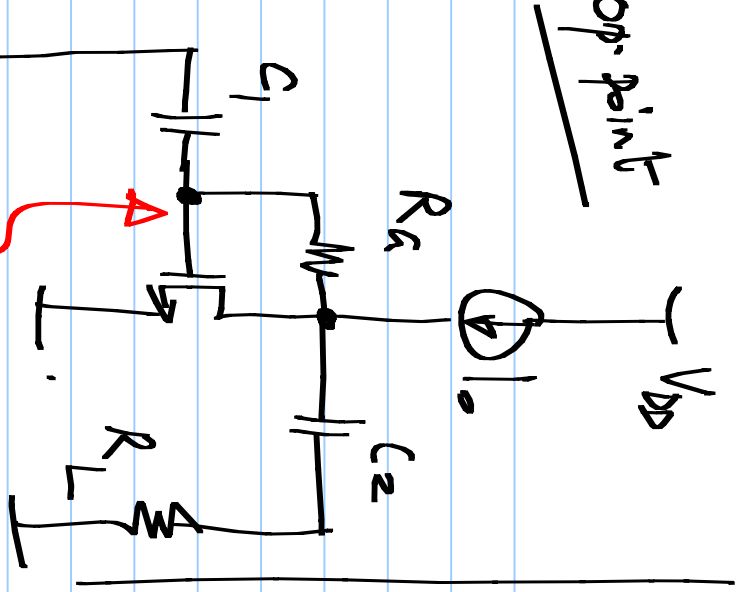


0



increasing ∂v

op. point

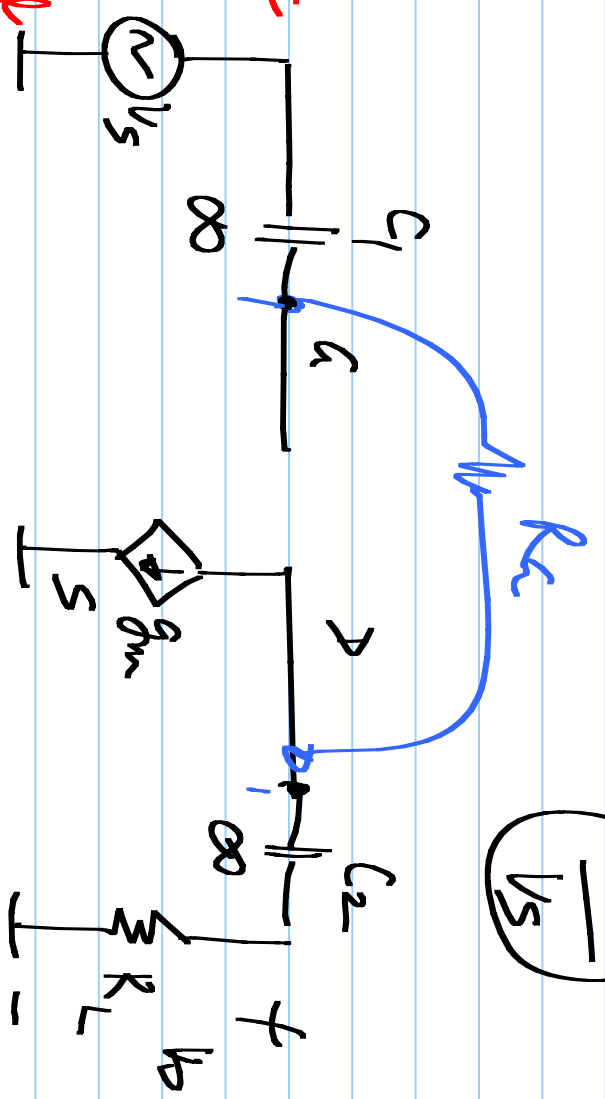


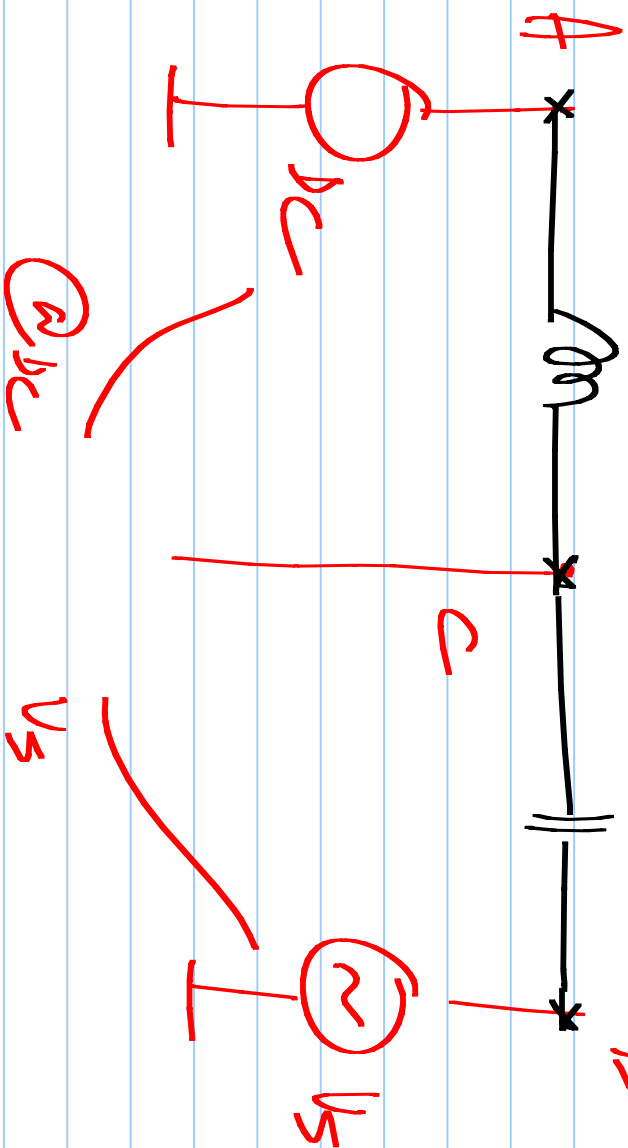
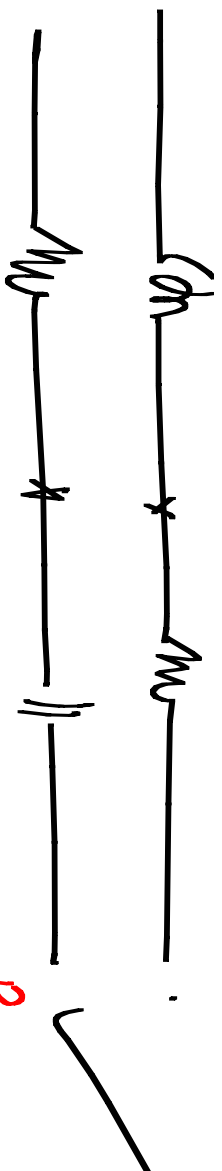
* change in V_D when $I_D \neq I_{D0}$ is the same as the change required in V_G

$\Rightarrow$ Make $V_D = V_G$.

$\left(\frac{V_D}{V_S} \right)$

must be V_D $\textcircled{a}$ dc
 incrementally, must be V_S $\textcircled{a}$ V_S signal





$$\frac{V_o}{V_s} =$$

$$\frac{1 - \frac{1}{R_c} - g_m}{1 - \frac{1}{R_c} + \frac{1}{R_L}}$$

$$\approx -g_m R_L$$

if

$$\frac{1}{R_c} \ll$$

$$\boxed{g_m}$$

$$R_c \gg R_L$$

$$\checkmark \quad \frac{1}{R_c} \ll$$

$$\boxed{\frac{1}{R_L}}$$