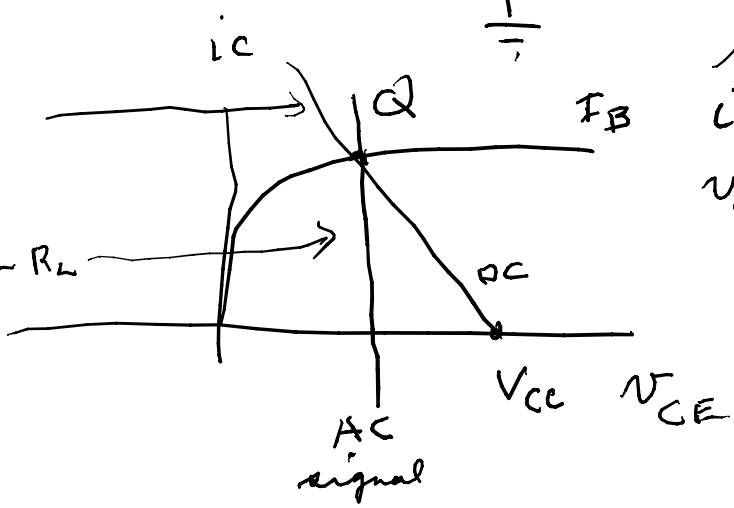


1/ slope
 $= -R_L - \frac{R_E}{\alpha}$

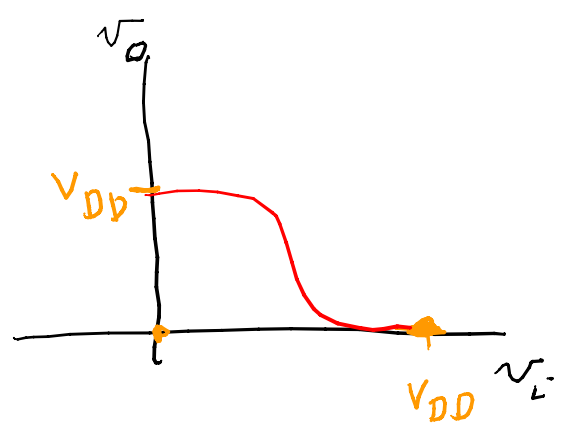
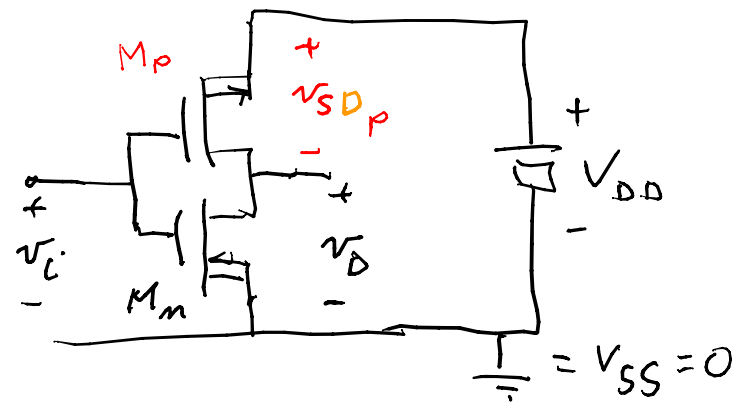
1/ slope = $-R_L$

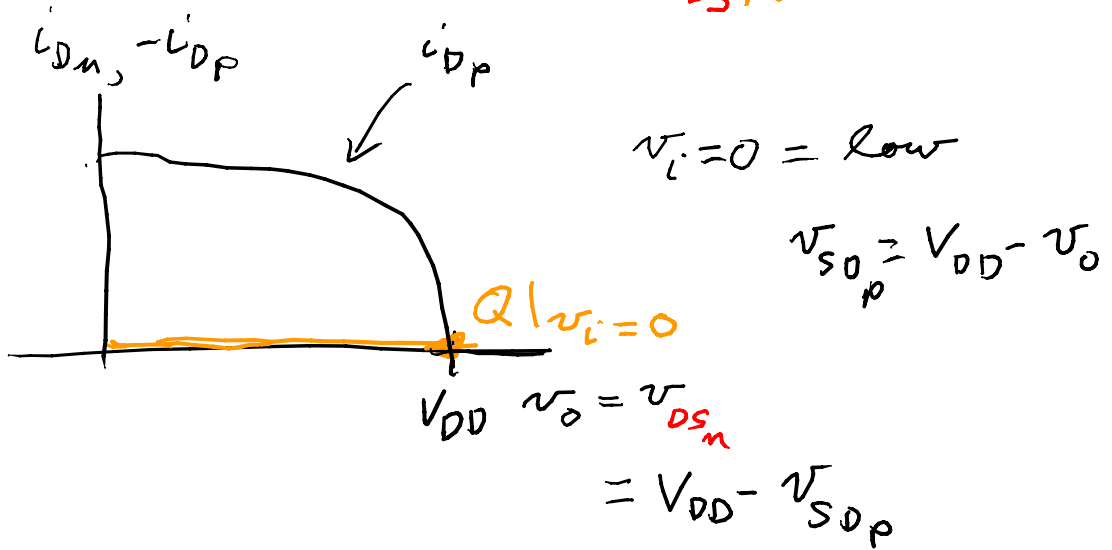
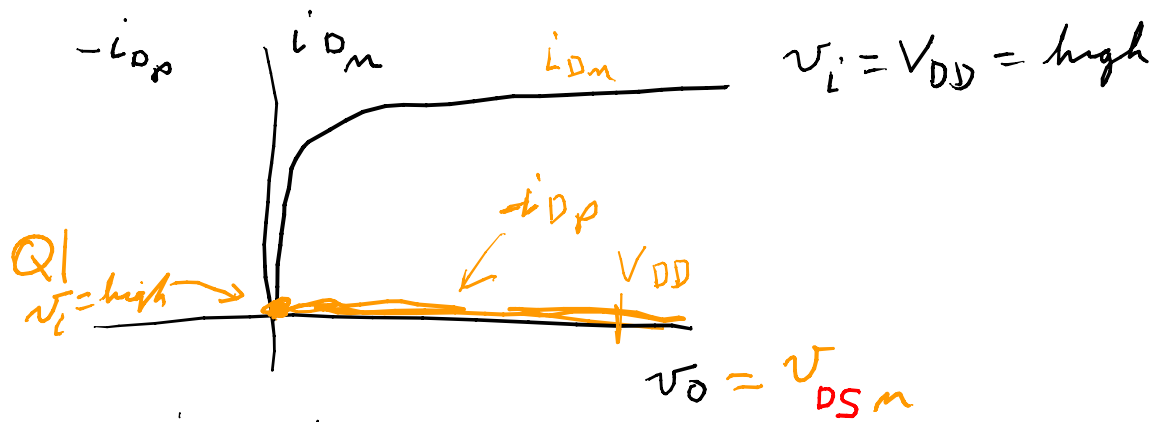


here

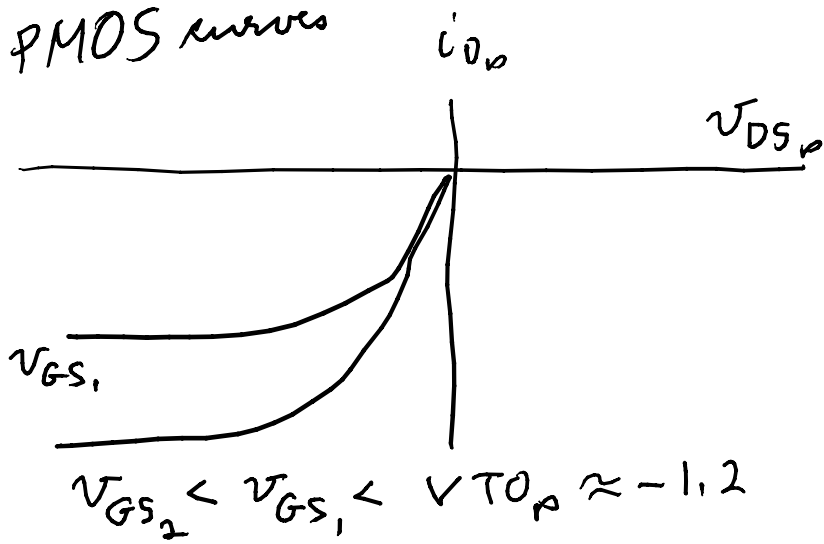
$i_c \Rightarrow$
 $V_{CE} = V_{CC} - R_L I_C - \frac{I_C R_E}{\alpha}$
 $= V_{CC} - (R_L + \frac{R_E}{\alpha}) I_C$

return to inverters

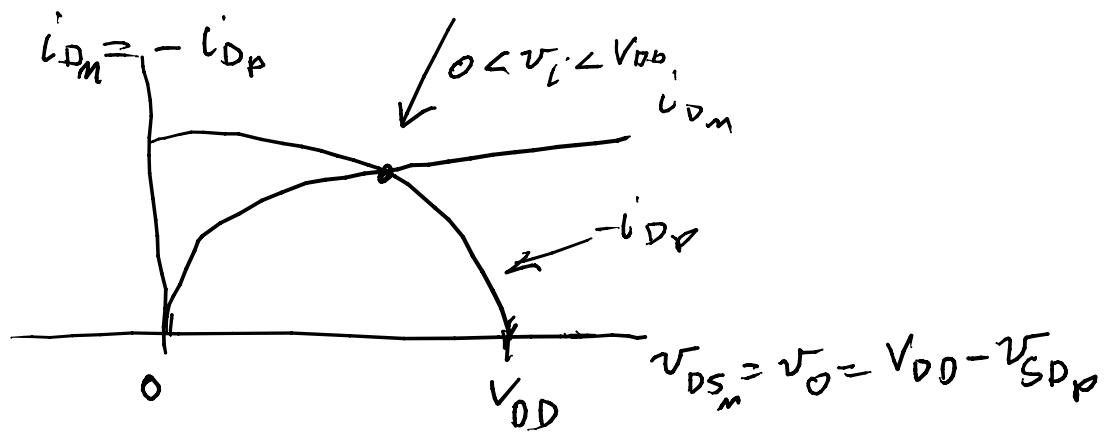




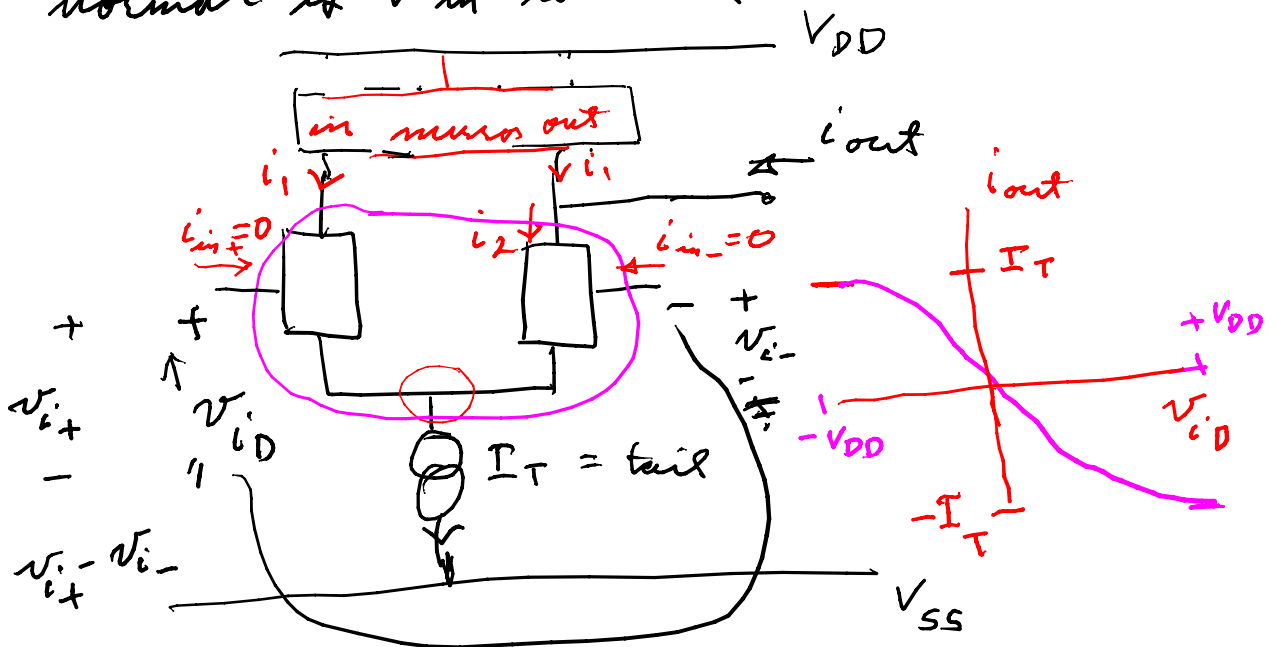
PMOS curves



for v_i in between $0 < v_i < V_{DD}$



Differential amplifiers
normal is v_{in} to I_{out}



MOS version

