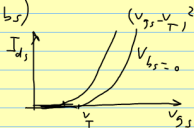
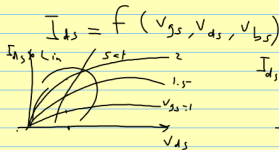
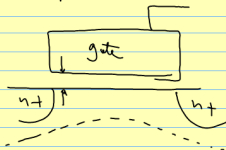
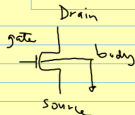
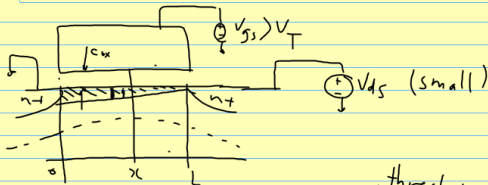


MOS Tr



Triode (Linear) region



$$Q(x) = -C_{ox} (V_{gs} - V(x) - V_t)$$

threshold V_t

$$I_{ds} = -C_{ox} \frac{\epsilon_{ox} x}{t_{ox}} (V_{gs} - V(x) - V_t) \cdot \underbrace{v_x(x)}_{-\mu \frac{dV(x)}{dx}} \cdot W$$

$-\mu E(x)$
 $-\mu \frac{dV(x)}{dx}$