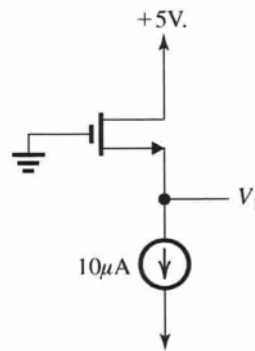


5.56 All parts $k_n' = 0.5 \frac{\text{mA}}{\text{V}^2}$, $V_t = 0.8\text{V}$,

$\lambda = 0$

(a)



$$V_1 = -V_{GS} = -\sqrt{\frac{(2)(10 \mu\text{A})}{0.5 \text{ mA/V}^2}} - 0.8\text{V}.$$
$$= -1\text{V}.$$

(b) same as (a), except $i_D = 100 \mu\text{A}$

$$V_2 = -1.432 \text{ V},$$