3) [MOSFET operating region practice]

For each MOSFET below, determine the MOSFET operating region (active, triode, cutoff). Assume NMOS $V_{TH} = +1V$ and PMOS $V_{TH} = -1V$.

- **a)**
  
- **e)**
4) [More MOSFET operating region practice]

For each MOSFET below, determine

a) the MOSFET operating region (active, triode, cutoff), and
b) the drain voltage $v_D$ and the DC drain current $I_D$.

Assume NMOS $V_{th} = +1V$ and PMOS $V_{th} = -1V$.

For both NMOS and PMOS, assume $\mu C_{ox} \frac{W}{L} = 2.0E - 4 \frac{A}{V^2}$.