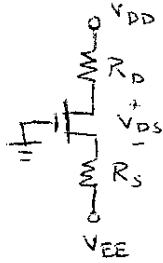
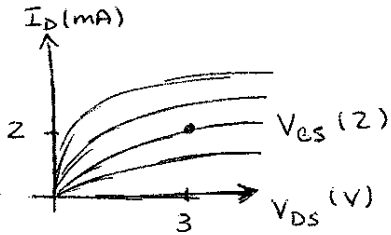


6. Diode at 1 mA w/ 0.7 forward voltage drop  
What is at 0.5 V, i.e. find  $I$ . Given  $k = \text{boltz}$   
 $T = \text{temp}$   
 $q = \text{charge}$

7. Given a graph, find a) load line equation  
b) slope  
c)  $R_D + R_S$  values



8. NMOS given info. find  $W$

9. Given different MOS diagrams

→ Determine N/P + region of operation

10. NMOS - solve for  $I_D$  w/ given info.