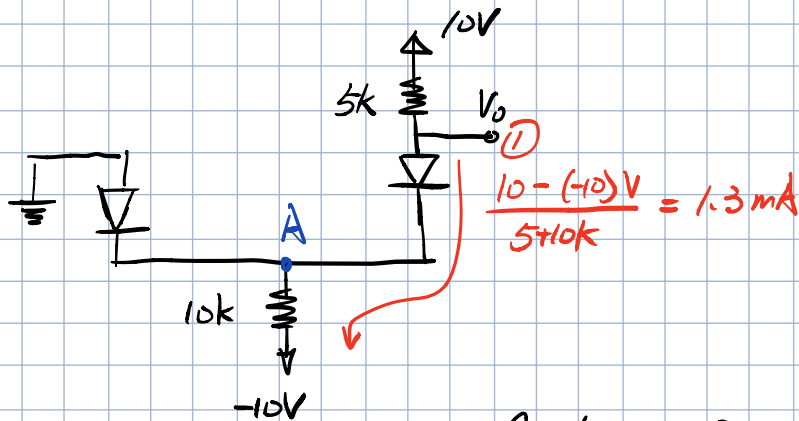
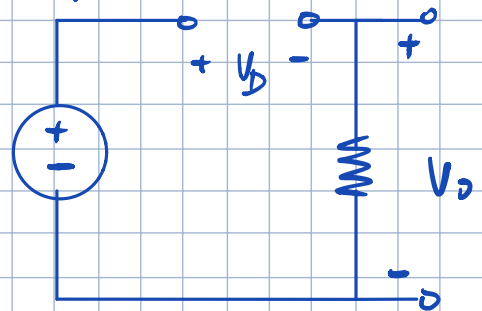
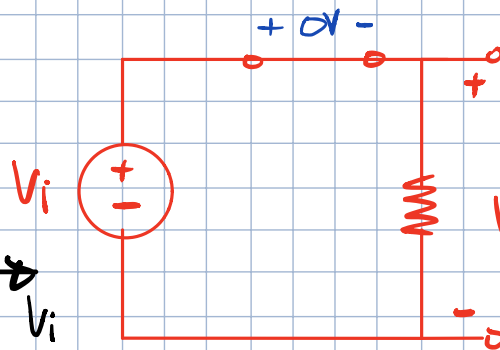
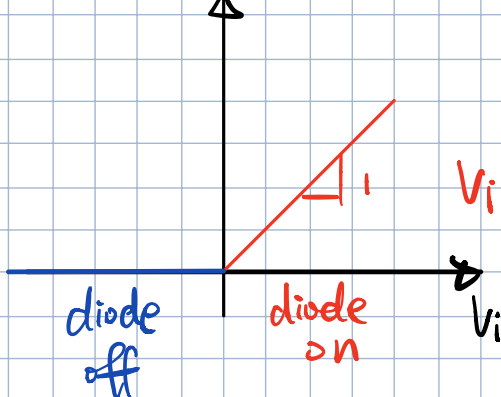
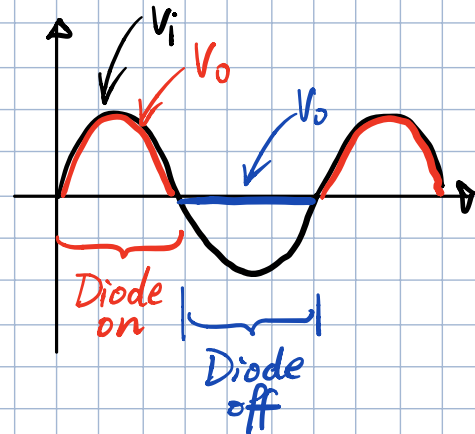
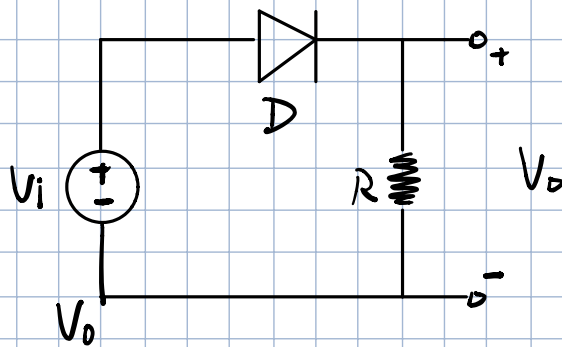


⇒ second guess:  $D_1$  off  $D_2$  on.

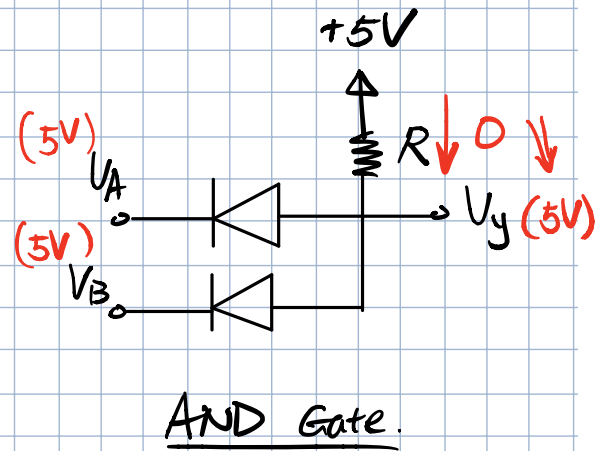
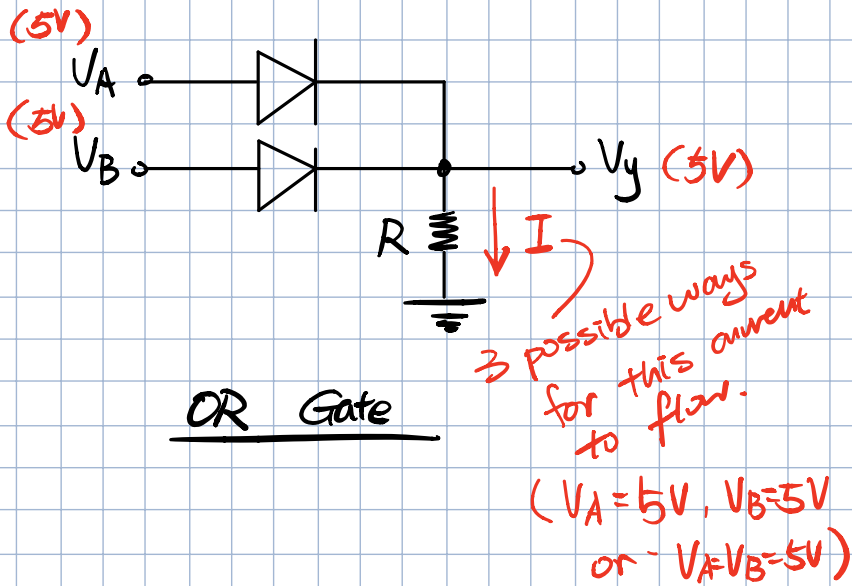


Conclusion:  $D_1$  is in reverse bias, hence turned off  
output voltage  $V_0$  is  $V_A = 3V$

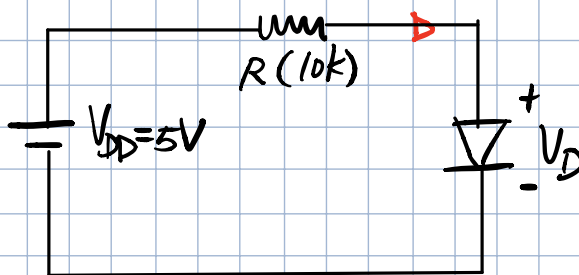
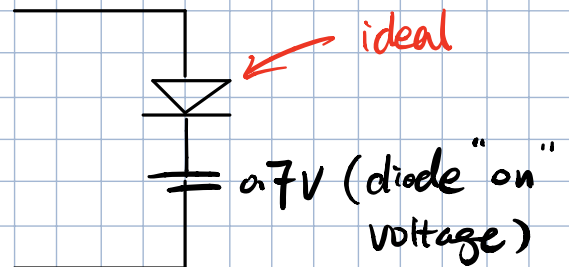
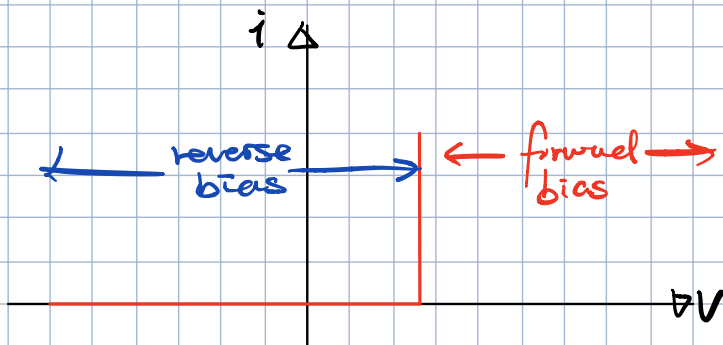
## Application of diode (rectifier)



# Diode logic gate.

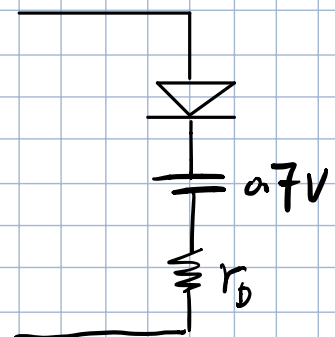
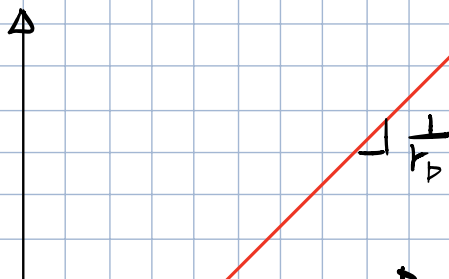


⇒ Constant voltage drop model (CVD)



$$I_D = \frac{V_{DD} - V_D}{R} = \frac{10V - 0.7V}{10k} = 0.43mA$$

⇒ Piece-wise linear model.



0.7V