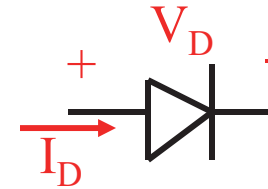
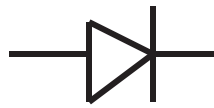
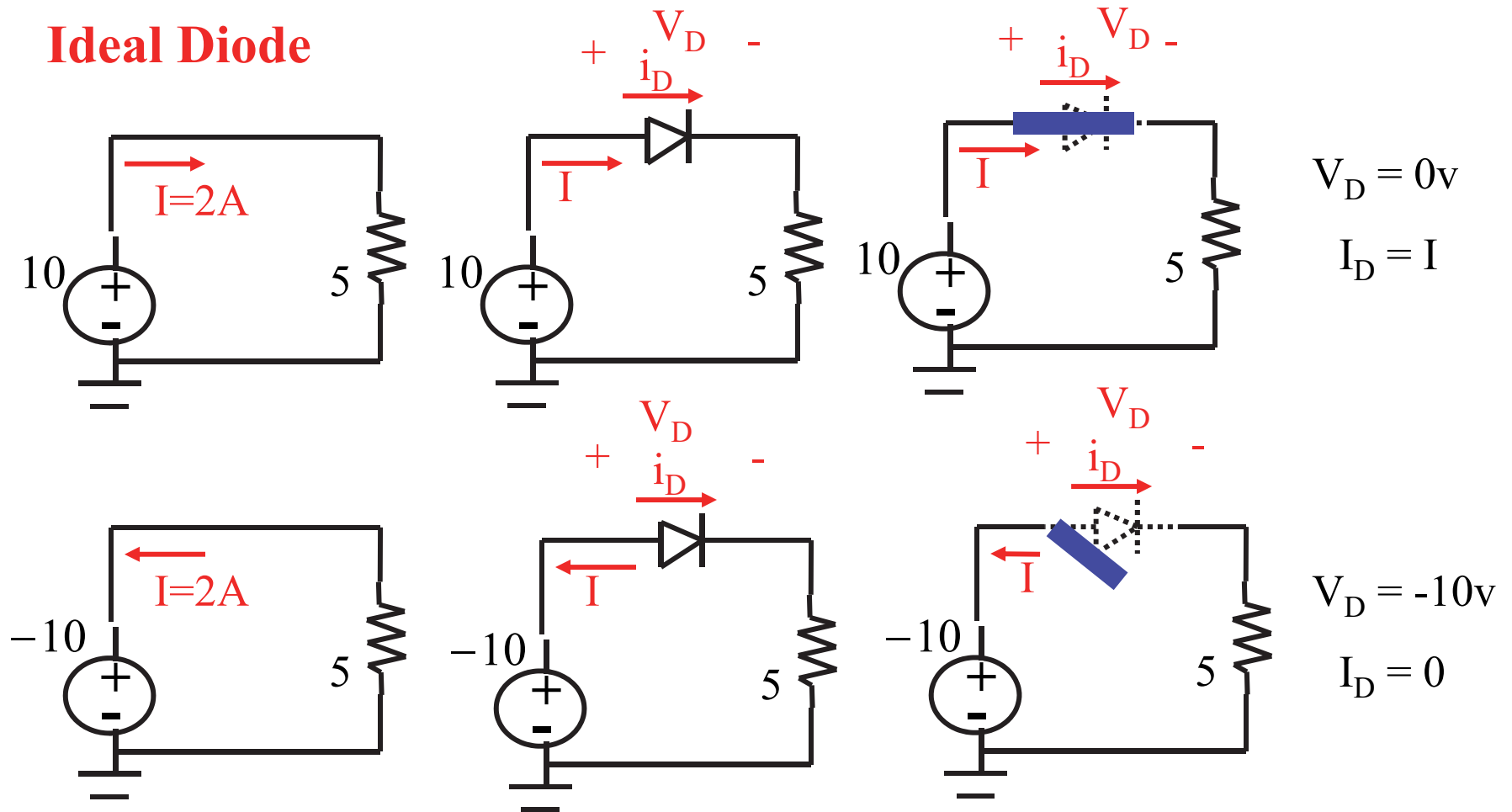
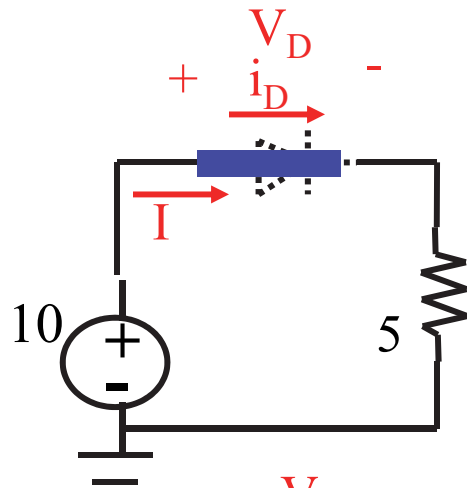


DIODE



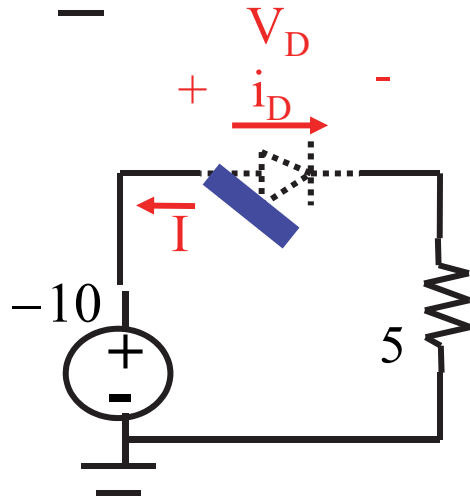
Ideal Diode





$$V_D = 0\text{V}$$

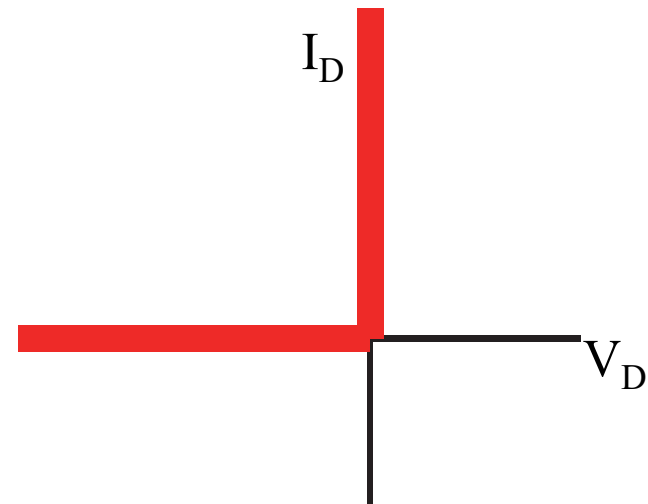
$$I_D = I$$



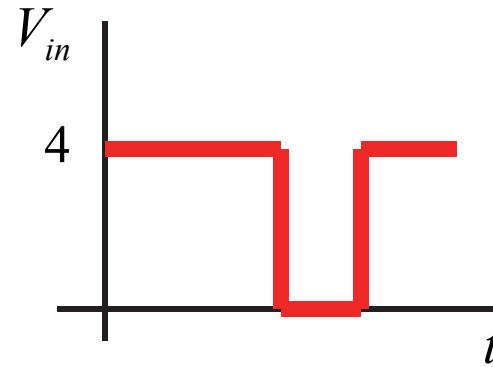
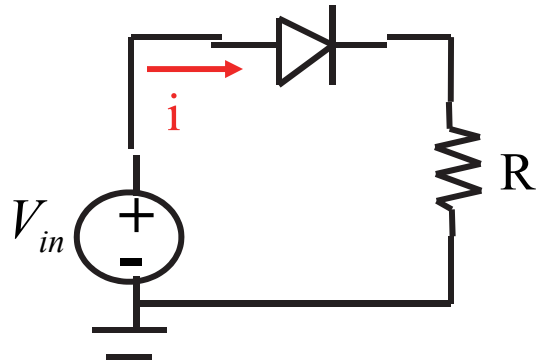
$$V_D = -10\text{V}$$

$$I_D = 0$$

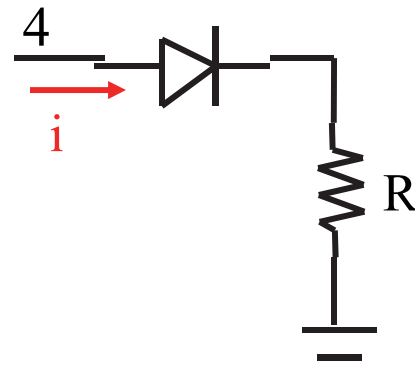
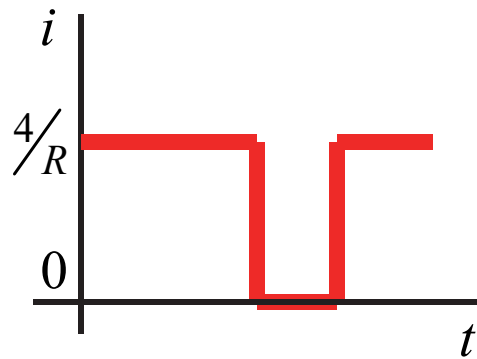
Ideal Diode



Ex.

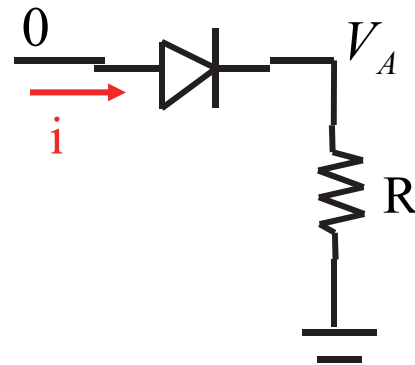


$i = ?$




$\therefore i = +ve$

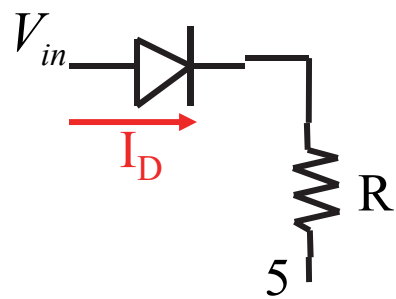
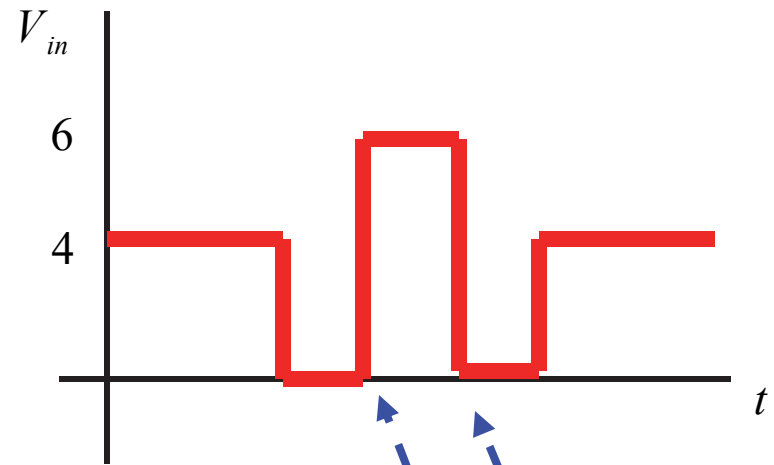
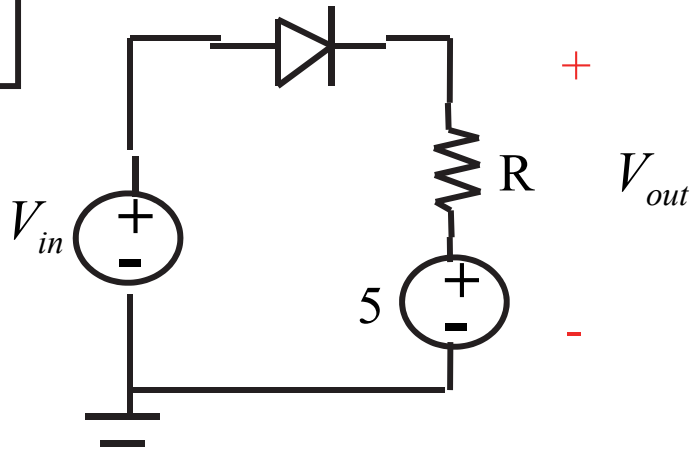
\therefore  close



$\therefore i = 0$

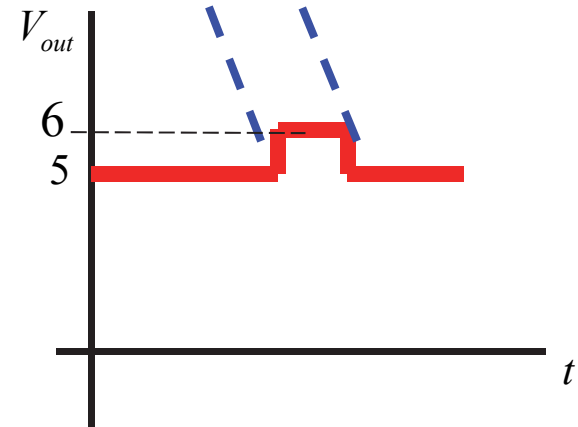
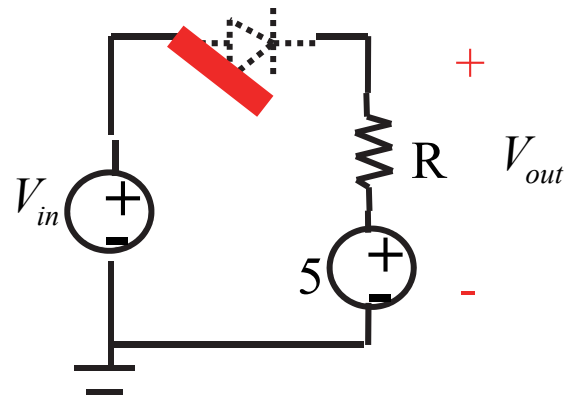
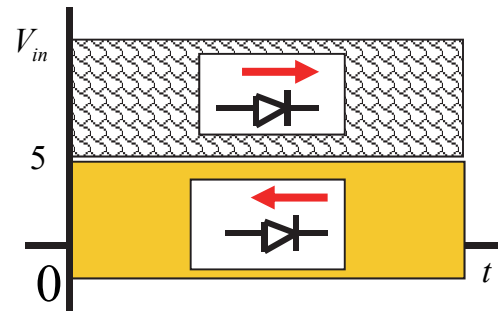
\therefore  close

Ex.

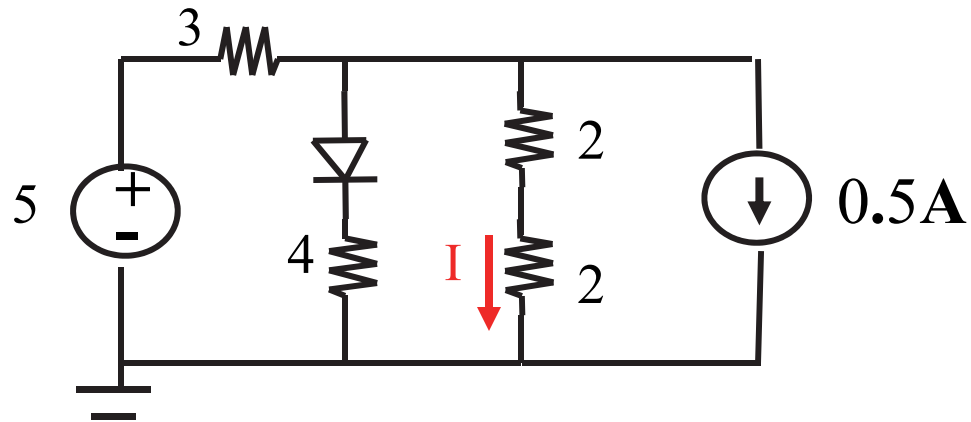


when $V_{in} \geq 5$

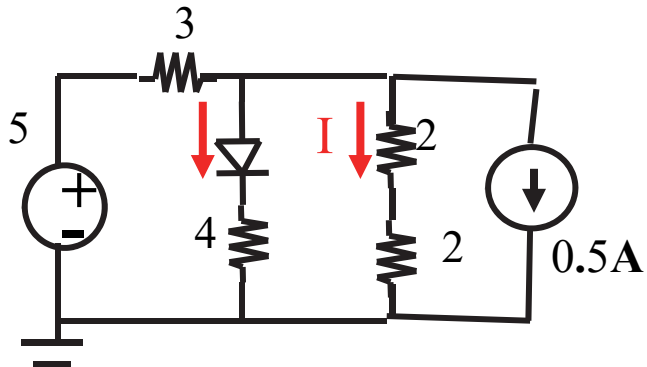
$$I_D = +ve$$



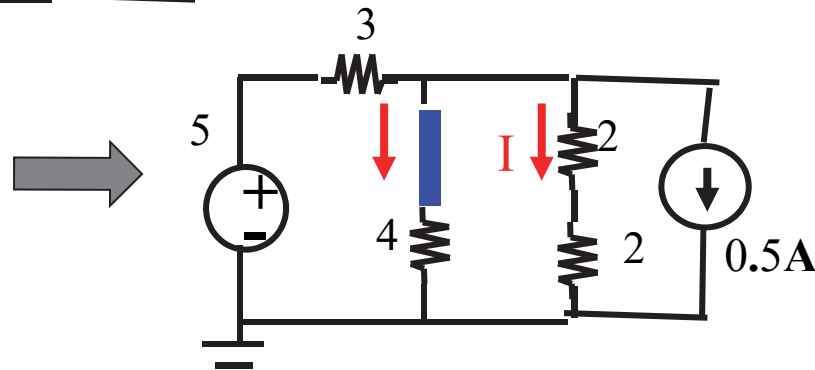
Ex.



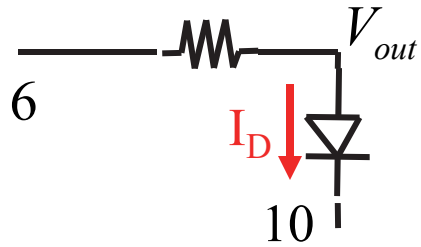
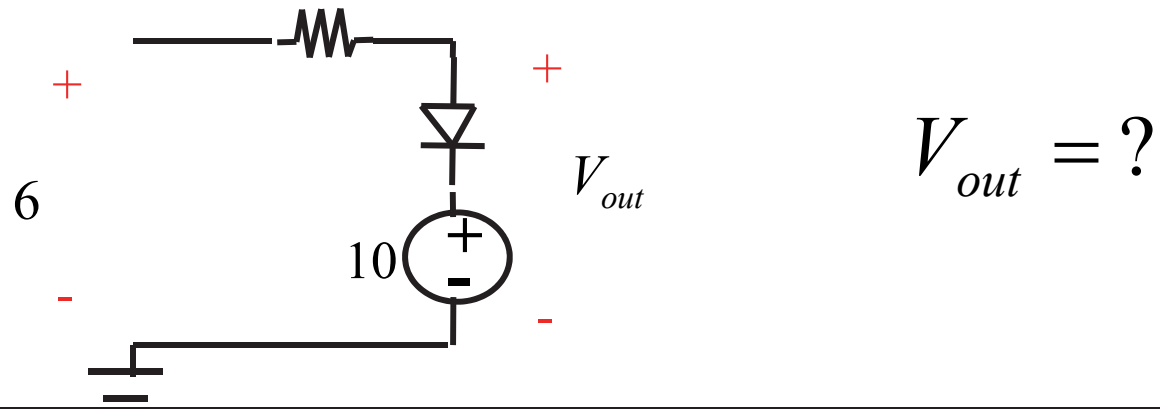
$$I = ?$$



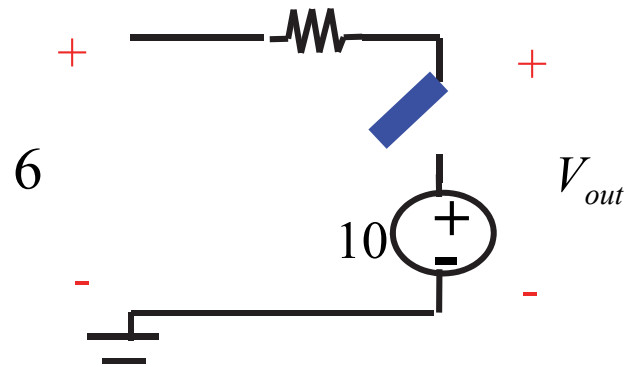
$$I = 0.35\text{A}$$



Ex.

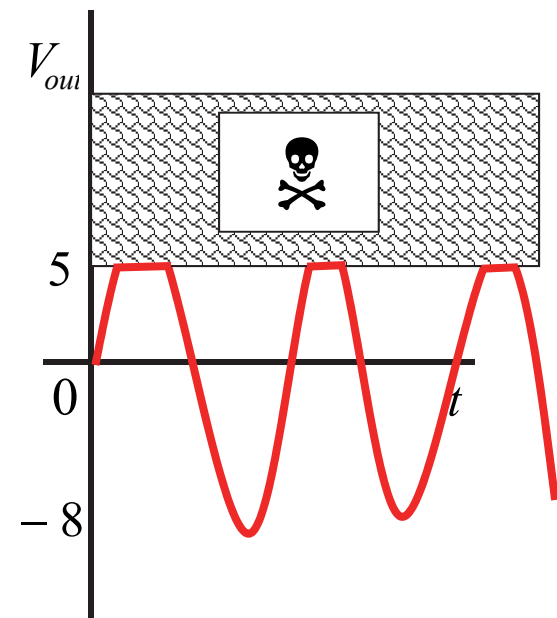
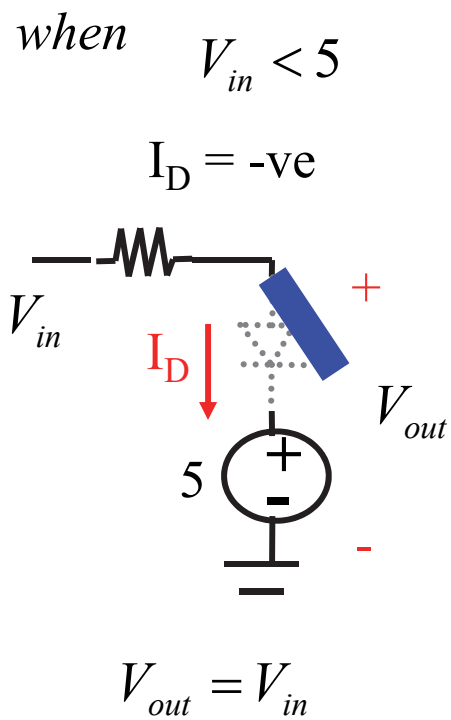
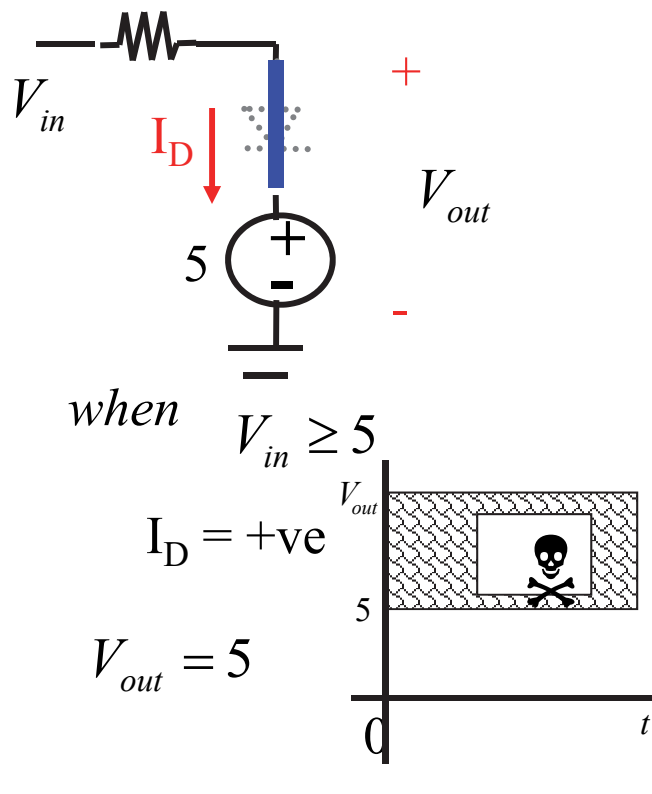
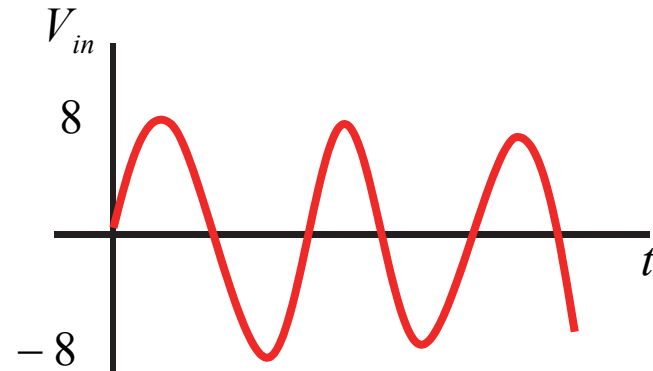
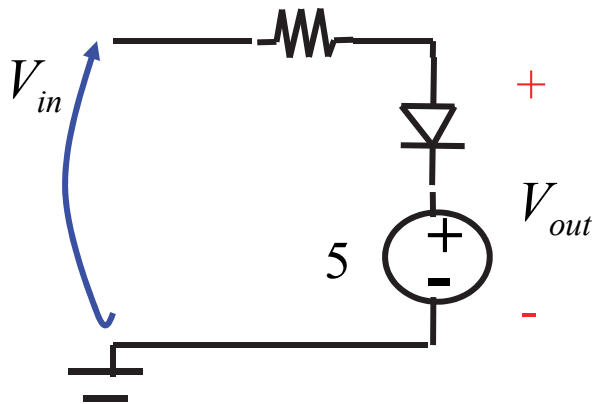


$$I_D = -ve$$

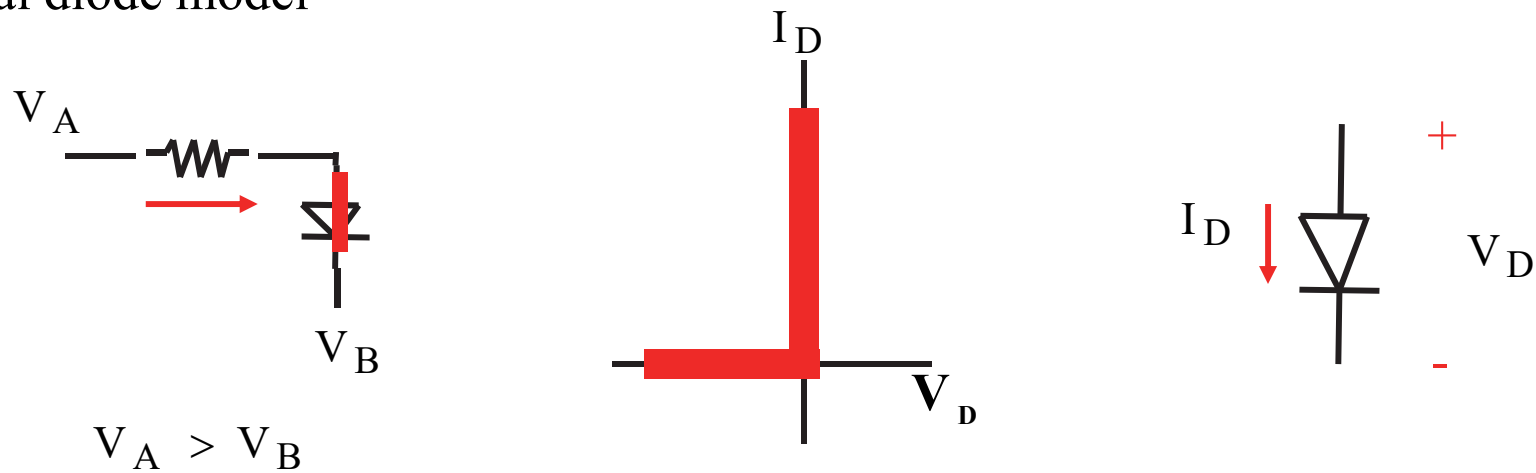


$$V_{out} = 6v$$

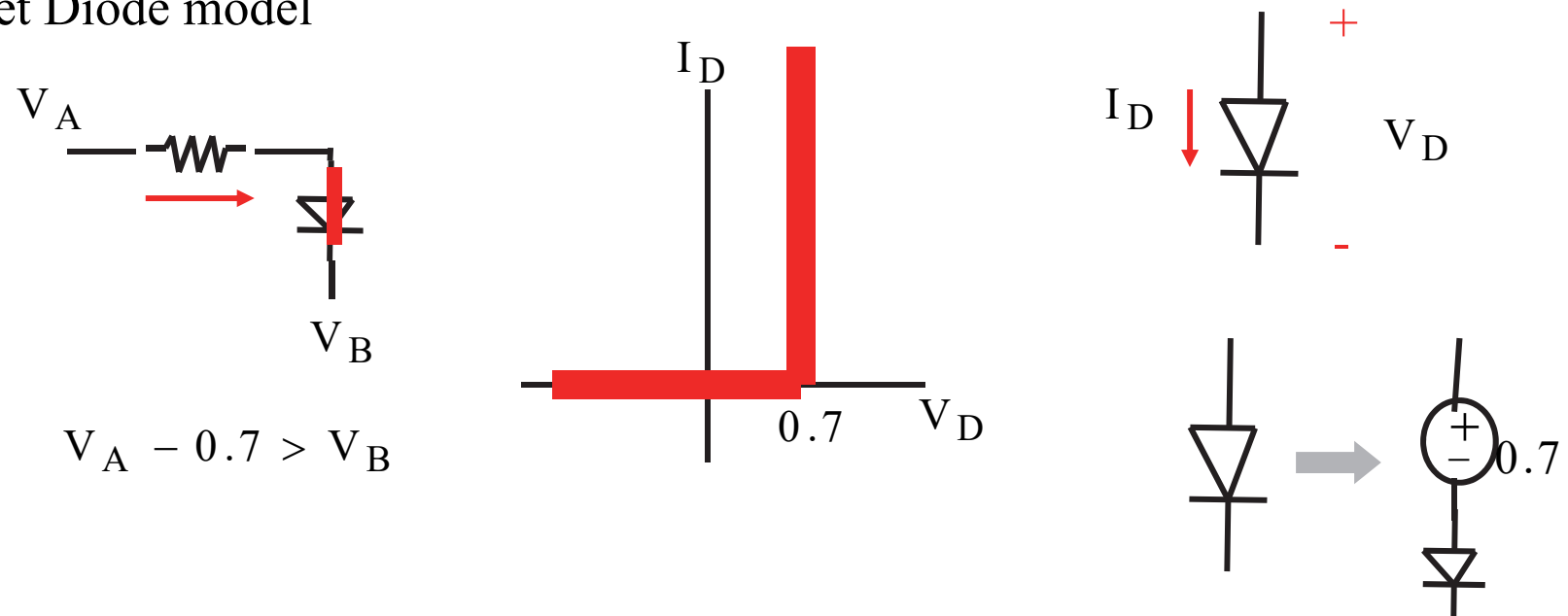
Ex.



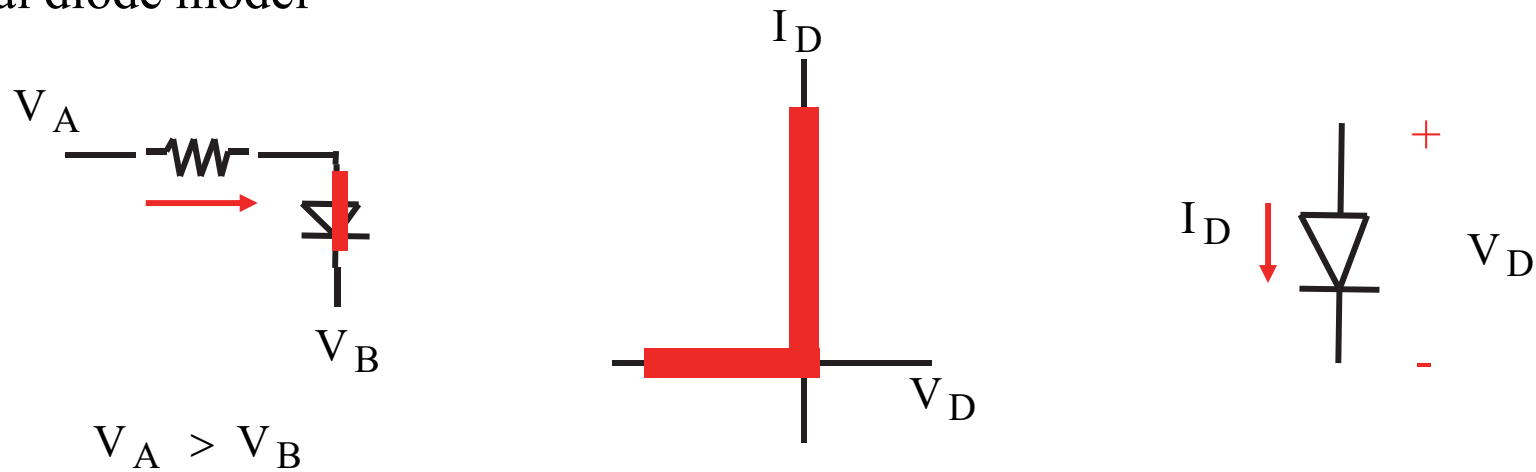
ideal diode model



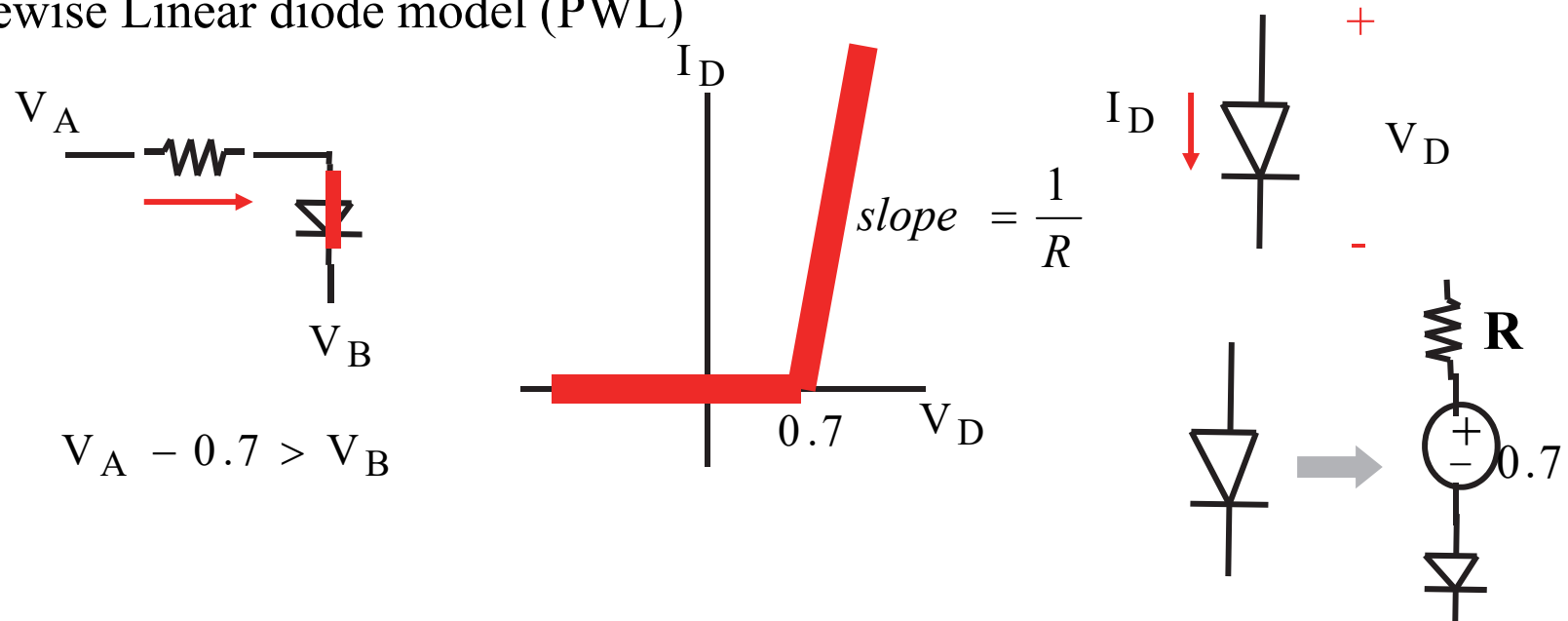
Offset Diode model



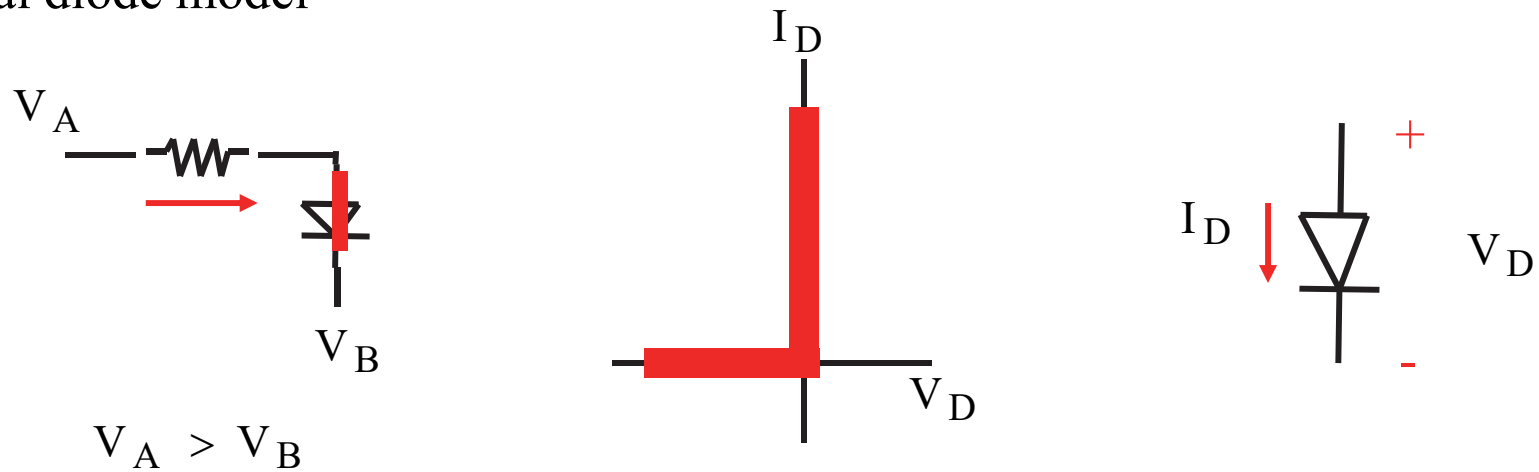
ideal diode model



Piecewise Linear diode model (PWL)



ideal diode model



Zener diode model

