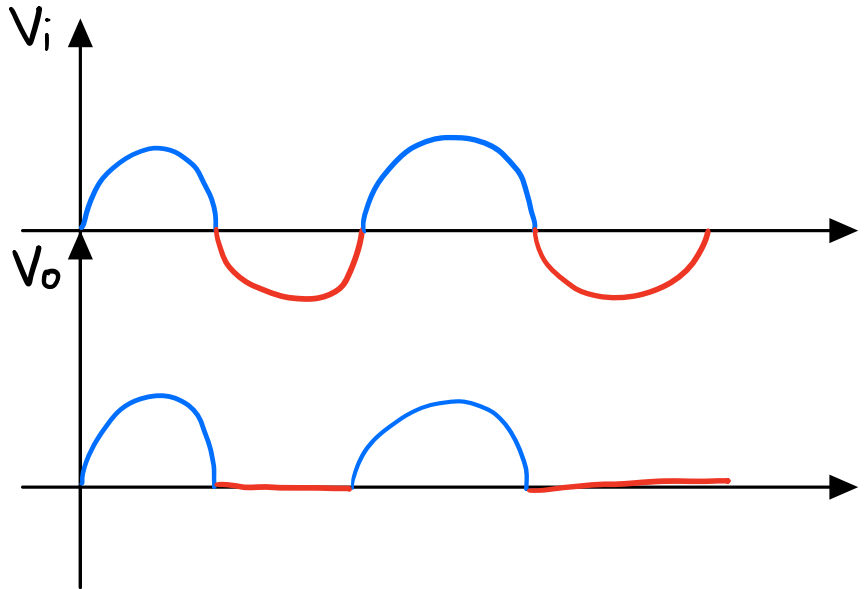
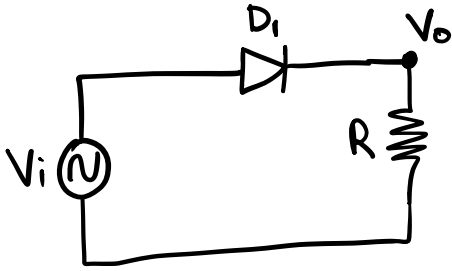
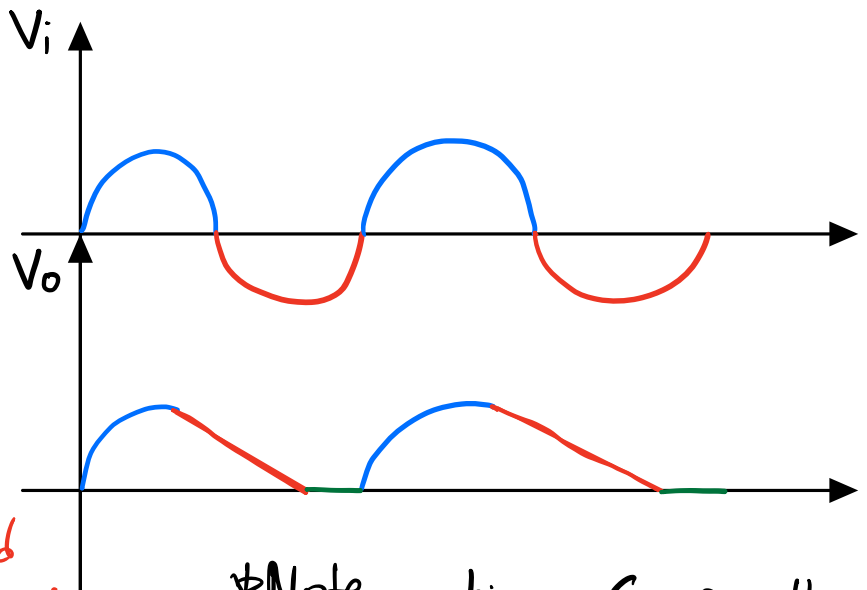
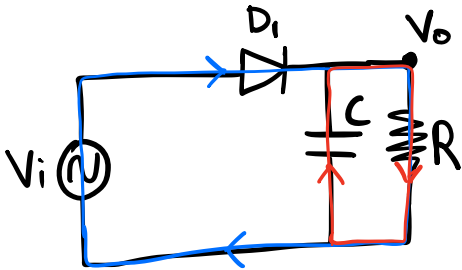


Rectifiers (AC \rightarrow DC)

Single Phase Rectifier (Pure Resistive Load) :



Single Phase Rectifier w/ Capacitor :



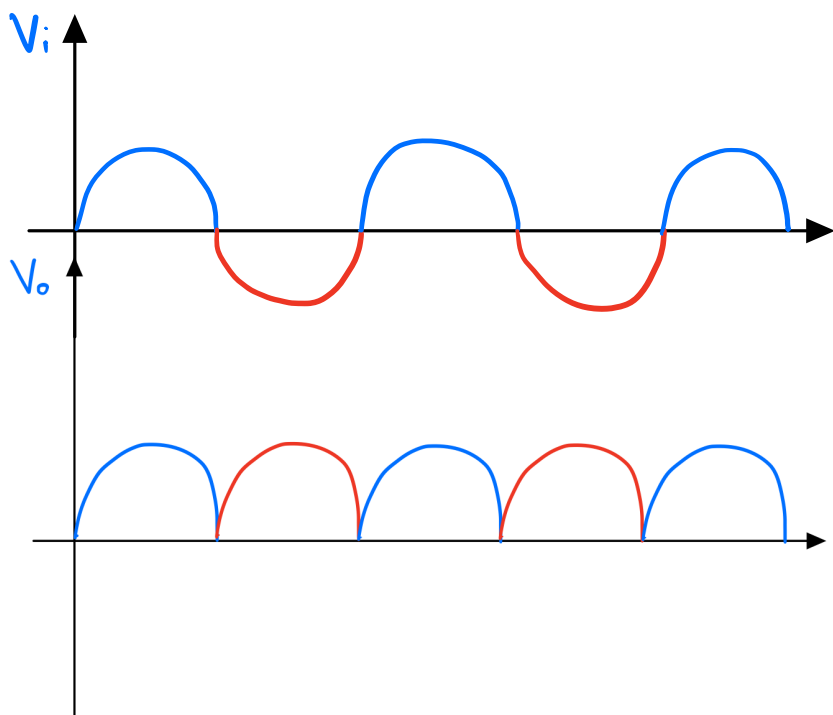
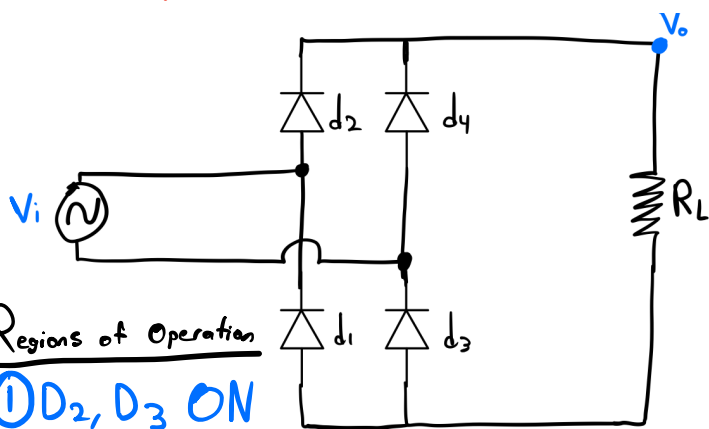
Regions of Operation :

- ① Diode is Forward Biased
- ② Diode is Reverse Biased
RC Circuit, Capacitor Discharging
- ③ Capacitor is fully discharged
Diode is Reverse Biased. No output

*Note, a bigger Cap smooths this out more (Less of a slope)
— Won't have a zero voltage region

Full Bridge Rectifier:

Wave

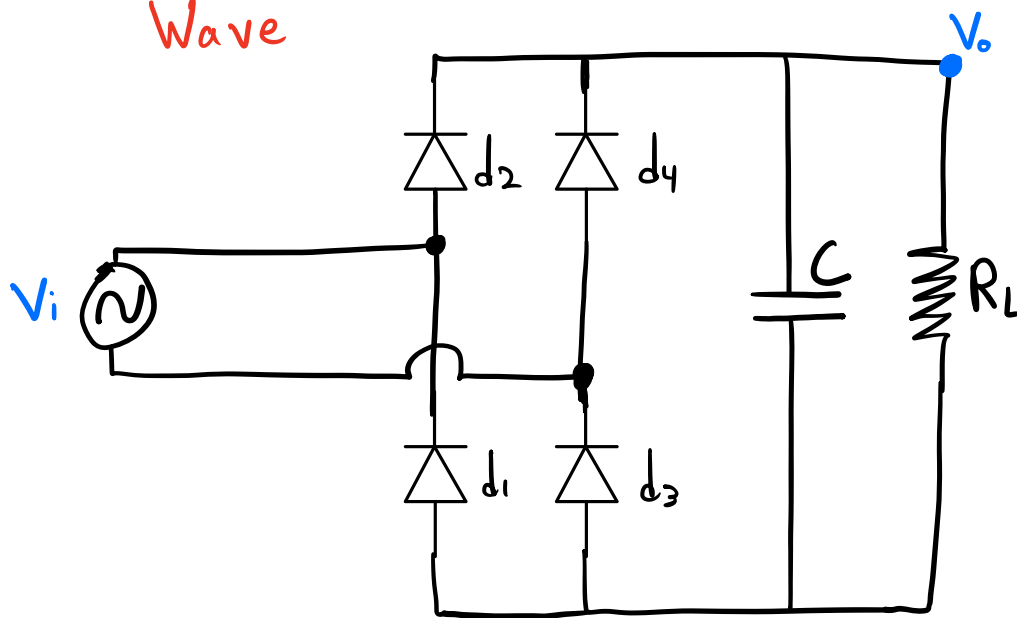


Regions of Operation

- ① D_2, D_3 ON
- ② D_4, D_1 ON

Full Bridge w/ Capacitor:

Wave



Regions of Operation

- ① D_2, D_3 ON Capacitor charging
- ② All Diodes off RC
- ③ D_4, D_1 ON capacitor charging
- ④ All Diodes off RC

