

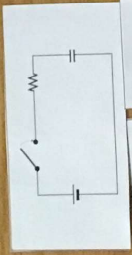
Review - Field & Energy

- Wrapup:
- Questions?
- How can you see Kirchhoff's laws in the graphs.
- Look at *limits* of graphs ($t = 0$ & $t \rightarrow \infty$).

- Put **all** cards (& clips) back in the bag

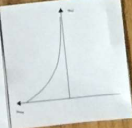
Review - Circuits

charging

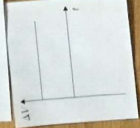


resistor

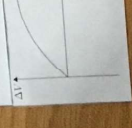
$$I(t) = I_0 e^{-t/\tau}$$



power supply

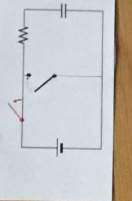


capacitor

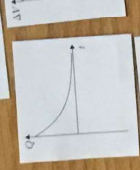


$$Q(t) = Q_0 (1 - e^{-t/\tau})$$

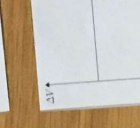
discharging



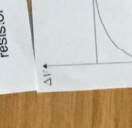
capacitor



$$Q(t) = Q_0 e^{-t/\tau}$$

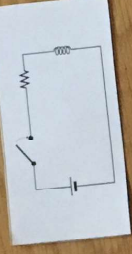


resistor



$$I(t) = I_0 e^{-t/\tau}$$

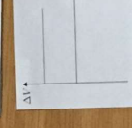
charging



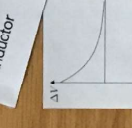
resistor



power supply

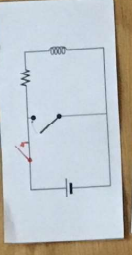


inductor

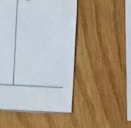


$$I(t) = I_0 (1 - e^{-t/\tau})$$

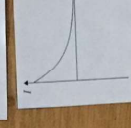
discharging



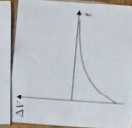
resistor



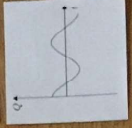
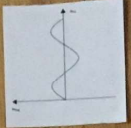
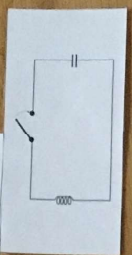
$$I(t) = I_0 e^{-t/\tau}$$



inductor



oscillating



$$I(t) = I_0 \sin(\omega t)$$