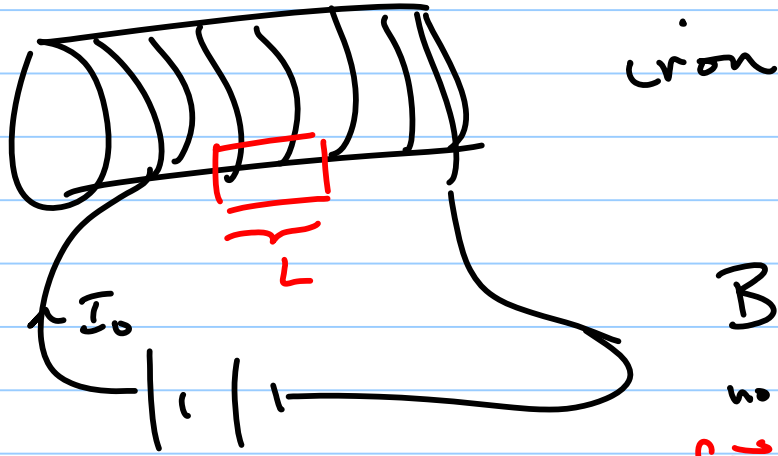


Ferromagnetism

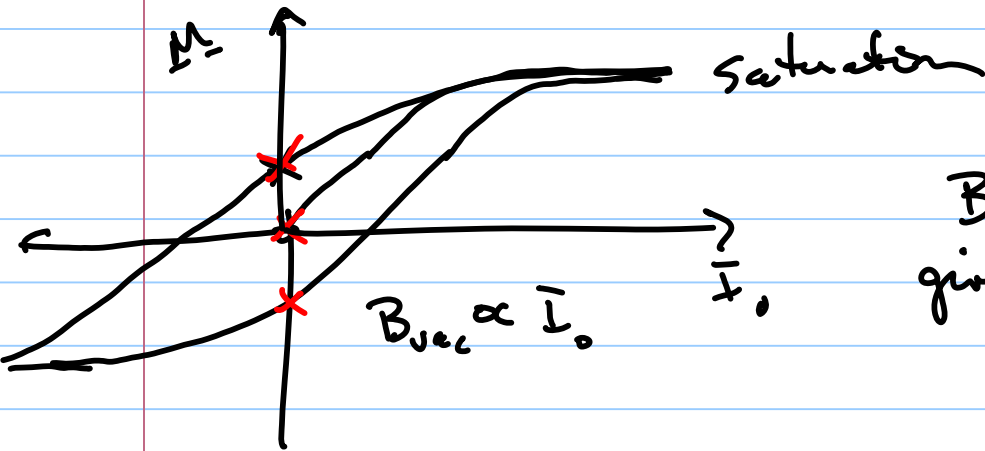


B due to I_f with no material

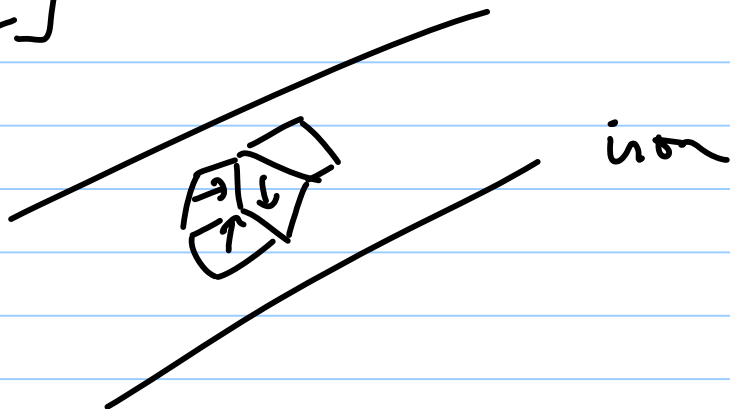
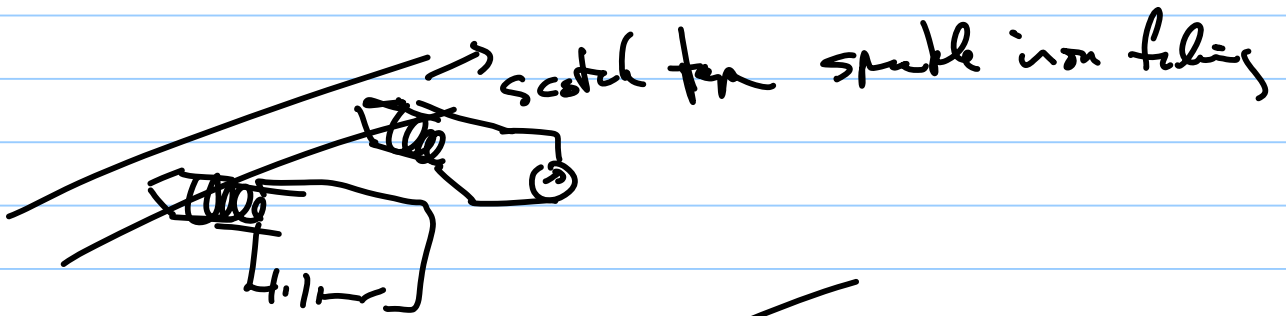
$$\oint \vec{B} \cdot d\vec{\ell} = \mu_0 I_{enc}$$

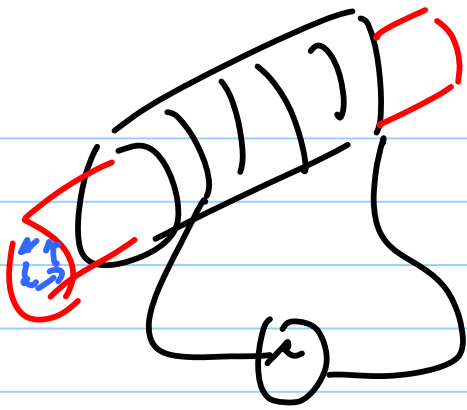
$$\underline{B_0 = \mu_0 n I_0}$$

$B_{bound} \propto M$

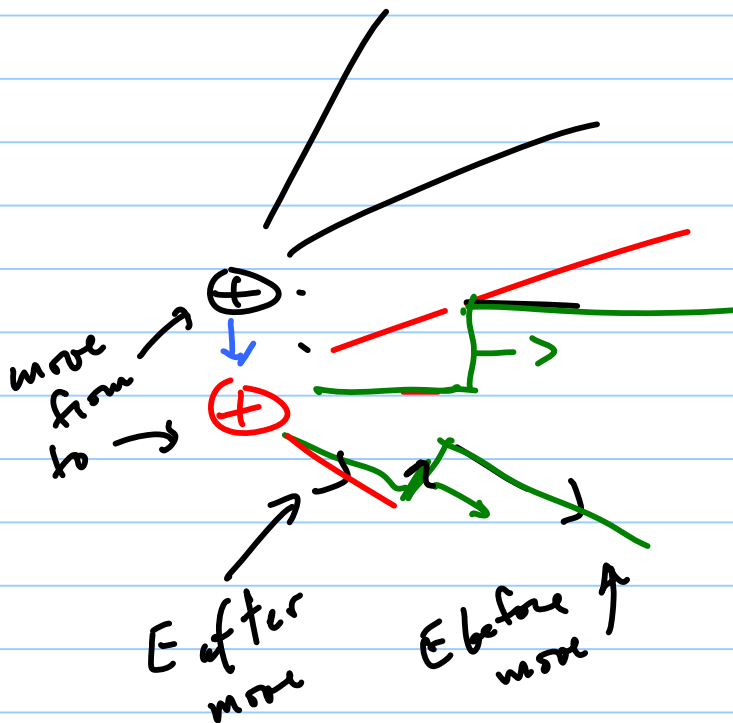
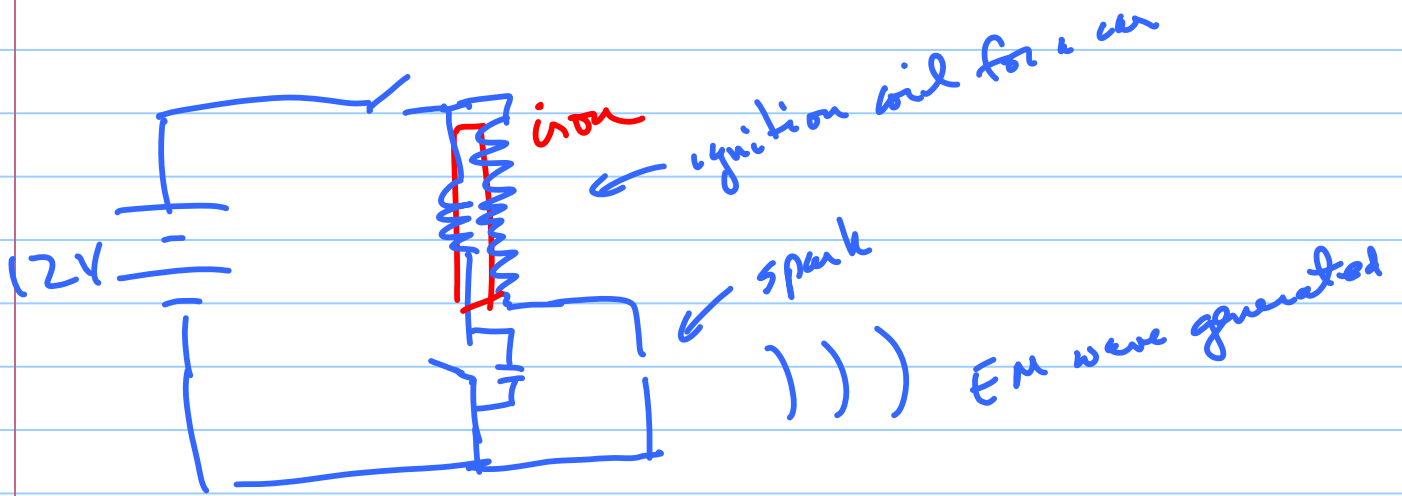


B due to iron: find $J_b \neq K_b$
 given M $\vec{K}_b = \vec{M} \times \hat{n}$

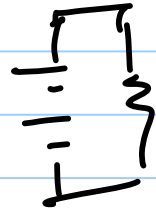
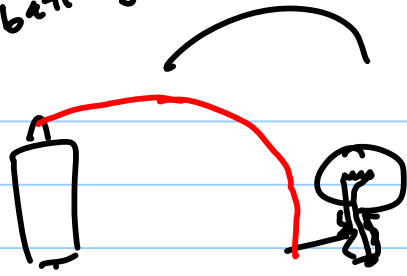




Faraday's law induces
 a current in the iron
 so break circuit by putting
 in a bunch of smaller cylinders
 that are insulated from
 each other



how to light bulb
with one wire, 1 battery, 1 bulb



Problem solving strategy: draw pictures & diagrams