#flo #inclass

---

1 | **magnetism!**

two right rules.

num 1: thumb in direction of current, curl fingers, eletric field

Pasted image 20211111103701.png||200 dont fail me.

perpendicular current and magnetic field

Screen Shot 2021-11-11 at 10.48.57 AM.png neg charge particle will move in a circle clockwise, pos charge *anti*-clockwise

force on moving charge in a magnetic field $\vec{F} = q\vec{V} \times \vec{B}$ q = charge V = velocity of charge B = magnetic field strength

$q = 1.6 * 10^{-19}$ $\vec{b} = 5 * 10^{-5} T$ $\vec{V} = 2000 \frac{m}{s}$ $(1.6 * 10^{-19}) * 2000 \times 5 * 10^{-5} = 1.6 * 10^{-20}$

centripital force :: force acting to center force to curve something is given by $F_c = \frac{mv^2}{R}$ solve for R: $R = \frac{mv^2}{F_C}$

mass of a proton: $1.67 * 10^{-27}$

plug in: $R = \frac{1.67 * 10^{-27} 2000^2}{1.6 * 10^{-20}} = 0.418m$
