

1.- a) $\vec{F} = I \vec{L} \times \vec{B}$ $|\vec{F}| = ILB$

b) Corriente I apunta hacia abajo

2.- $\vec{F} = e \vec{v} \times \vec{B}$

$$|\vec{F}| = evB = \frac{Mv^2}{a/2} = \frac{2Mv^2}{a}$$

$$\therefore eB = \frac{2Mv}{a} \quad \therefore v = \frac{eBa}{2M}$$

$$\frac{1}{2} M v^2 = eV$$

$$M = \frac{2eV}{v^2} = \frac{2eV \times 4M^2}{e^2 B^2 a^2}$$

$$M = \frac{e^2 B^2 a^2}{8eV}$$

$$M = \frac{e B^2 a^2}{8V}$$