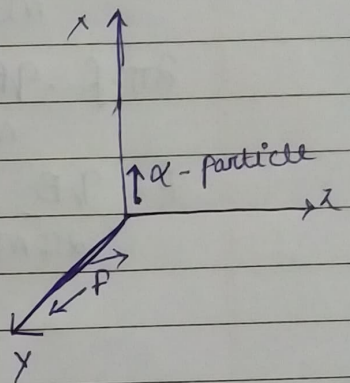


$$\textcircled{1} \vec{F} = q(\vec{v} - \vec{B}), -ve$$

$\textcircled{2}$ magnetic force on a point charge: -

Given FRH

So, $-z$ axis drain direction
B' field.



$$\textcircled{3} \vec{F} = q(\vec{v} \times \vec{B})$$

$$F = qvB \sin \theta$$

$$B = \frac{F}{qv \sin \theta}$$

$$(1T) = (1N)$$

$$\frac{(1C)(1m/s) \sin 90^\circ}{}$$

④

$$\omega = 2\pi \cdot f$$

$$v = \omega r \quad \text{--- (i)}$$

$$r = \frac{mv}{\cancel{v}qB}$$

$$\omega = \frac{\omega_0}{m}$$

$$2\pi \cdot f = \frac{qB}{m}$$

$$f = \frac{qB}{2\pi m} = f_0 \frac{1}{m}$$

$$e^- \rightarrow 9.1 \times 10^{-31} \text{ kg}$$

$$p^+ \rightarrow 1.631 \times 10^{-27} \text{ kg}$$

which circular path move with higher frequency is e^- .

⑤

Trajectory of 1st proton is a circle
trajectory of 2nd proton is a helix.