

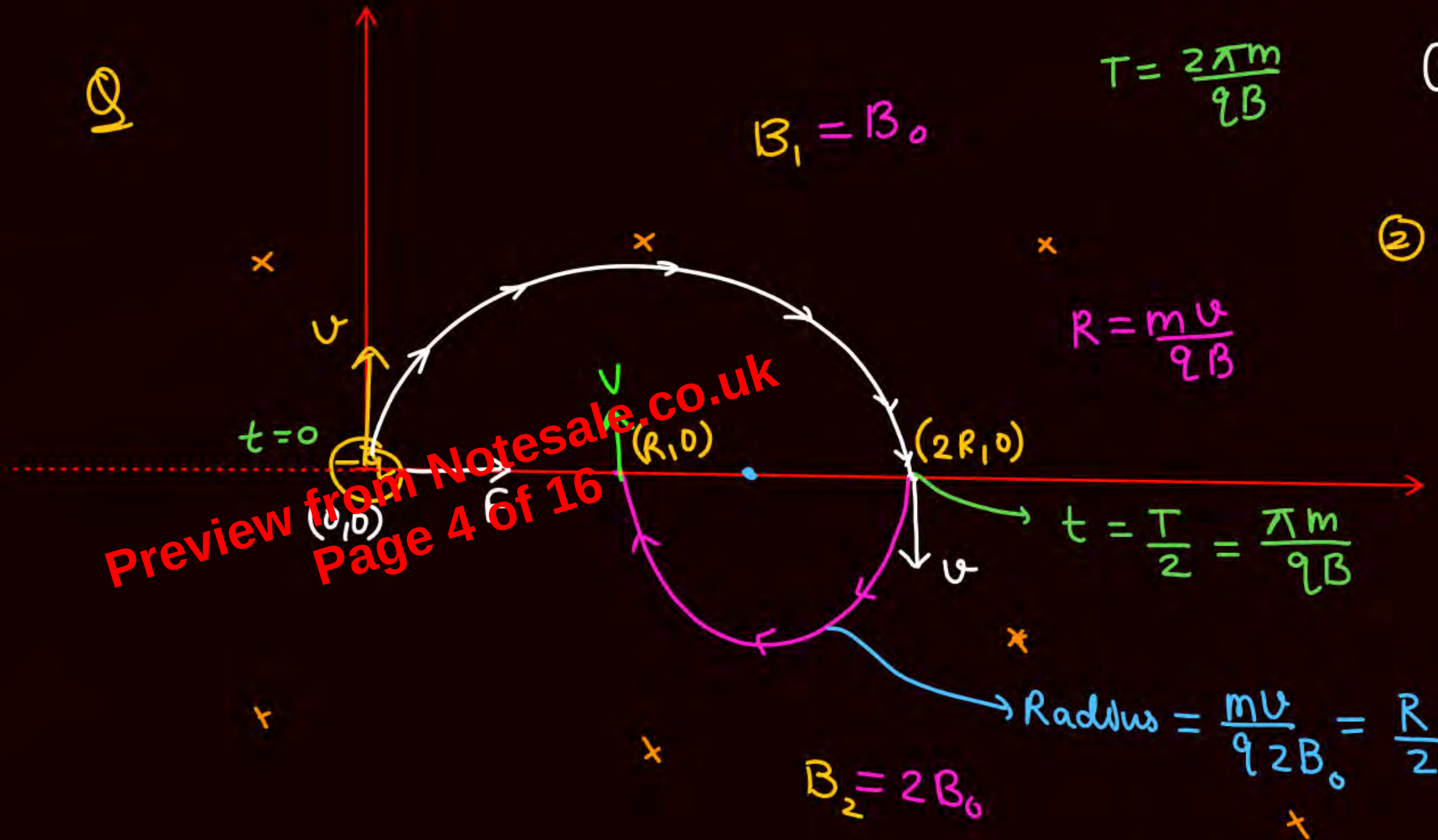
Q

$$B_1 = B_0$$

$$T = \frac{2\pi m}{qB}$$

① when and where particle will cross x-axis

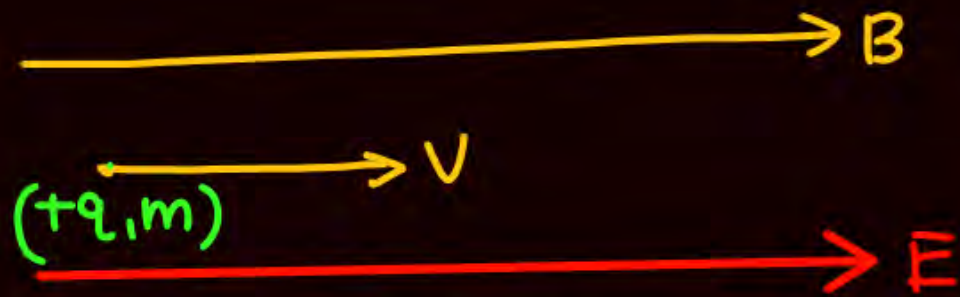
② Avg. speed from $t=0$ to when particle crosses x-axis second time.



when 2nd time it crosses
 $= \frac{T_1}{2} + \frac{T_2}{2}$

$$T_1 = \frac{2\pi m}{qB}$$

$$T_2 = \frac{2\pi m}{q(2B)}$$



$$\vec{F}_{\text{net}} = q(\vec{v} \times \vec{B}) + q\vec{E}$$



- * speed up, $a = \frac{qE}{m}$
- * st. line path

$$t=0 \longrightarrow t=t_0$$

$$s = vt_0 + \frac{1}{2}at_0^2$$

- * E.F ने WD किया
- * $(WD)_{E.F} + (WD)_{\text{magnetic force}} = \Delta K.E.$