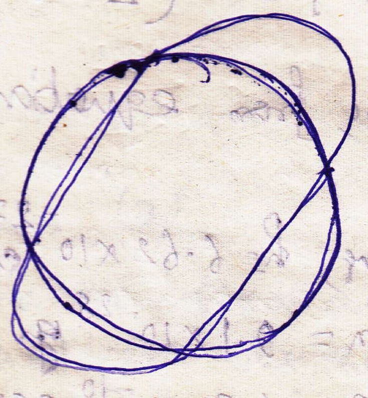
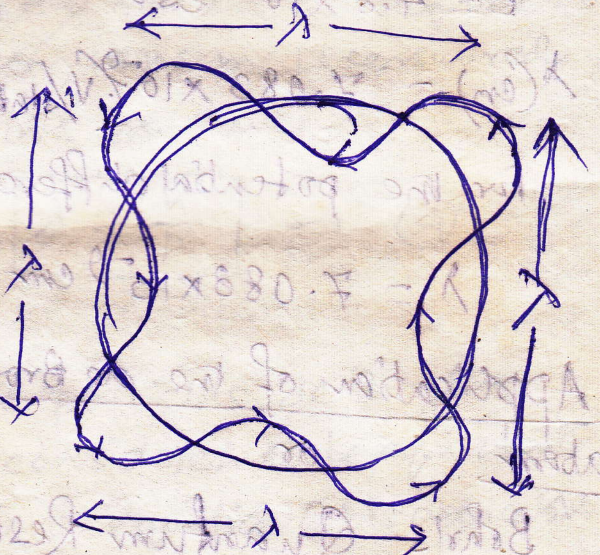
To satisfy this condition,

the circumference ($2\pi r$) of the Bohr's circular orbit must be an integral multiple of the wave-length (λ).

So, $2\pi r = n\lambda \rightarrow (P)$

If the above condition is not maintained the positions of the crests and troughs will be changing with time and the electron wave will be out of phase giving rise to destructive interference. Such electron waves are not stationary.





By considering the de-Broglie's equation eqn (P) is written as

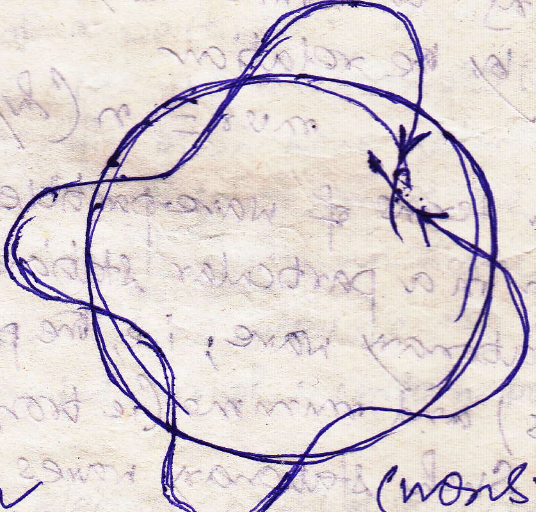
$$2\pi r = n\frac{h}{p}$$

as, $[p = mv]$

So, $2\pi r = \frac{nh}{mv}$

So, $mvr = n\left(\frac{h}{2\pi}\right)$

Which is Bohr's quantum restriction to define stationary state.



(Non Stationary orbit)