

Act 3

Consider a particle in an infinite well.

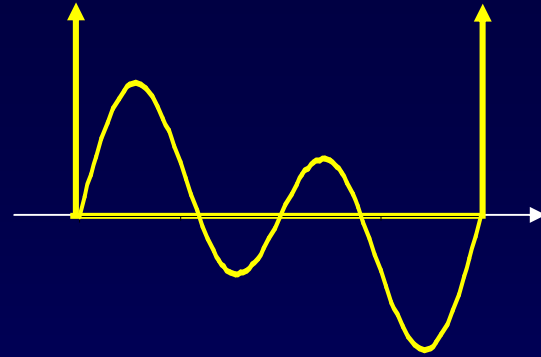
It is in the state:

$$\Psi(x, t) = 0.5\Psi_2(x, t) + 0.866\Psi_4(x, t)$$

with $\psi_2(x)$ and $\psi_4(x)$ both normalized.

We now measure the energy of the particle. What value is obtained?

- a. E_2 b. E_4 c. $0.25 E_2 + 0.75 E_4$ d. It depends on when we measure the energy.



Not part of this act, but an important question, nevertheless:

If E_2 is observed, what is the state of the particle after the measurement?