

Last Time

Schrodinger's Equation (SEQ)

A wave equation that describes spatial and time dependence of $\Psi(x,t)$.
Expresses $KE + PE = E_{\text{tot}}$
Second derivative extracts $-k^2$ from wave function.

Constraints that $\psi(x)$ must satisfy

Existence of derivatives (implies continuity).
Boundary conditions at interfaces.

Infinitely deep 1D square well ("box")

Boundary conditions \rightarrow Discrete energy spectrum:

$$E_n = n^2 E_1, \text{ where } E_1 = h^2/8mL^2.$$