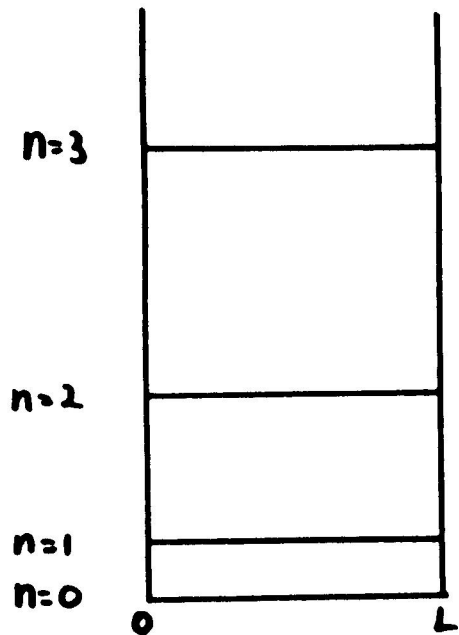


$$\hat{H}\Psi = \left[-\frac{\hbar^2}{2\mu} \frac{d^2}{dx^2} + V(x) \right] \Psi = E \Psi$$

Square Well

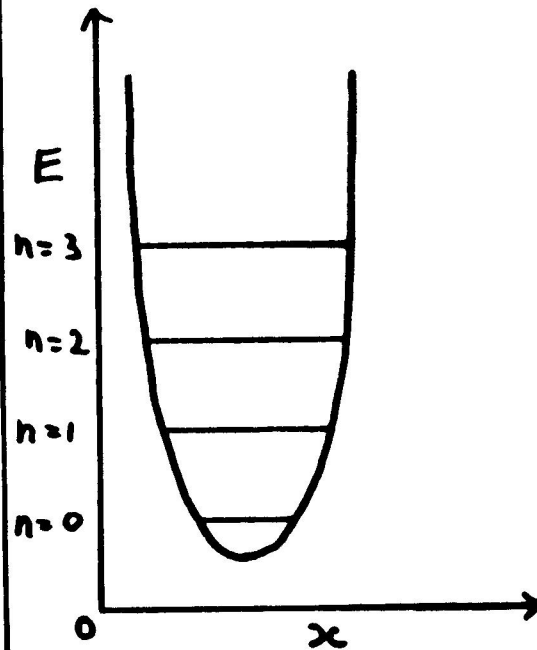
$$V(x) = \begin{cases} 0 & \text{if } 0 < x < L \\ \infty & \text{elsewhere} \end{cases}$$



$$E_n = \left[\frac{\hbar^2}{8\mu L^2} \right] n^2$$

Harmonic Oscillator

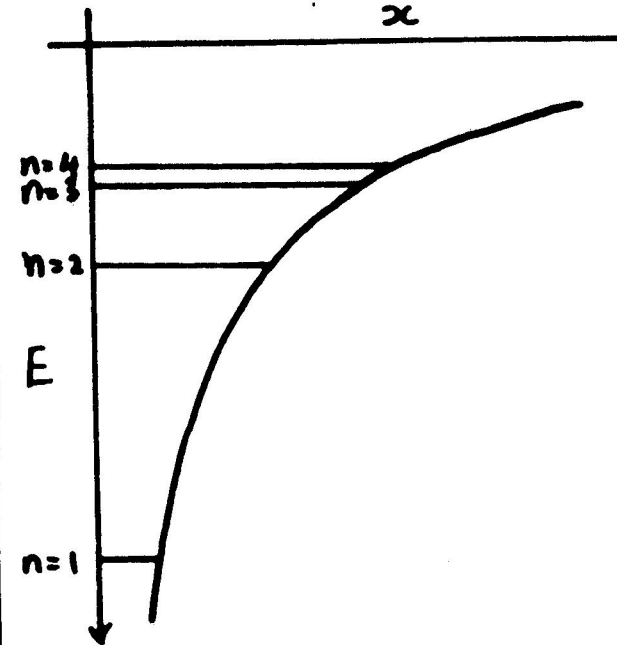
$$V(x) = \frac{1}{2} kx^2$$



$$E_n = \left[\frac{\hbar^2 k}{\mu} \right]^{1/2} (n + 1/2)$$

Radial Part of H Atom

$$V(x) = -\frac{Ze^2}{x}$$



$$E_n = -\frac{(2\mu Z^2 e^4 / 2\hbar^2)}{n^2}$$