

$$E_{nm} = \frac{\hbar^2}{2m} \left( \frac{n\pi}{L} \right)^2 + \frac{\hbar^2}{2m} \left( \frac{m\pi}{2L} \right)^2 = \underbrace{\frac{\hbar^2 \pi^2}{8mL^2}}_{\mathcal{E}} (4n^2 + m^2) \quad n, m = 1, 2, \dots$$

$$E_{11} = 5 \mathcal{E}$$

$$E_{21} = 17 \mathcal{E}$$

$$E_{12} = 8 \mathcal{E}$$

$$E_{22} = 20 \mathcal{E}$$

$$E_{13} = 13 \mathcal{E}$$

$$E_{23} = 25 \mathcal{E}$$

$$E_{14} = 20 \mathcal{E}$$

$$E_{24} = 32 \mathcal{E}$$

$$E_{15} = 29 \mathcal{E}$$

$$E_{31} = 37 \mathcal{E}$$

⋮

$$E_{11} < E_{12} < E_{13} < E_{21} < \underbrace{E_{14} = E_{22}}_{\text{degenerat}}$$

degenerat