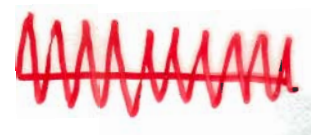


$\psi^* \psi$ - probability density

n large



n large



ψ

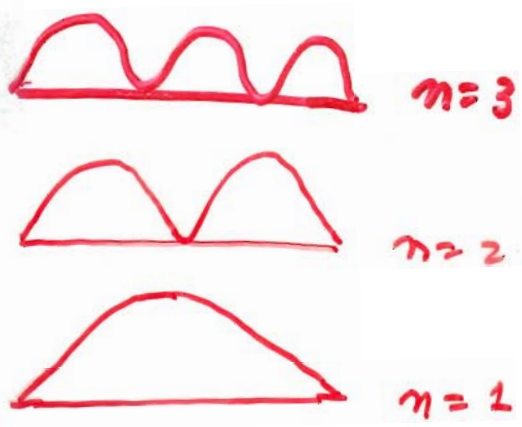
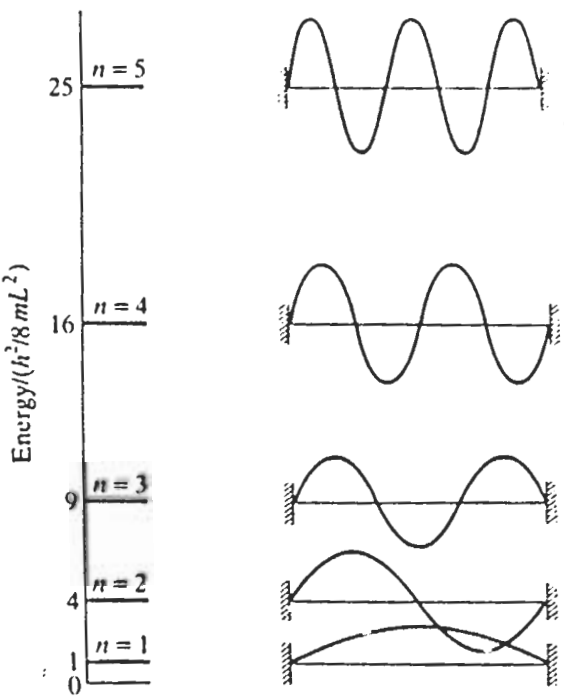


Fig. 12.2 The allowed energy levels and the corresponding (sine wave) wavefunctions for a particle in a box. Note that the energy levels increase as n^2 , and so their separation increases as the quantum number increases. Each wavefunction is a standing wave, and successive functions possess one more half wave and a correspondingly shorter wavelength.

Similar to classical results . . .
Correspondence principle

~~Probability~~