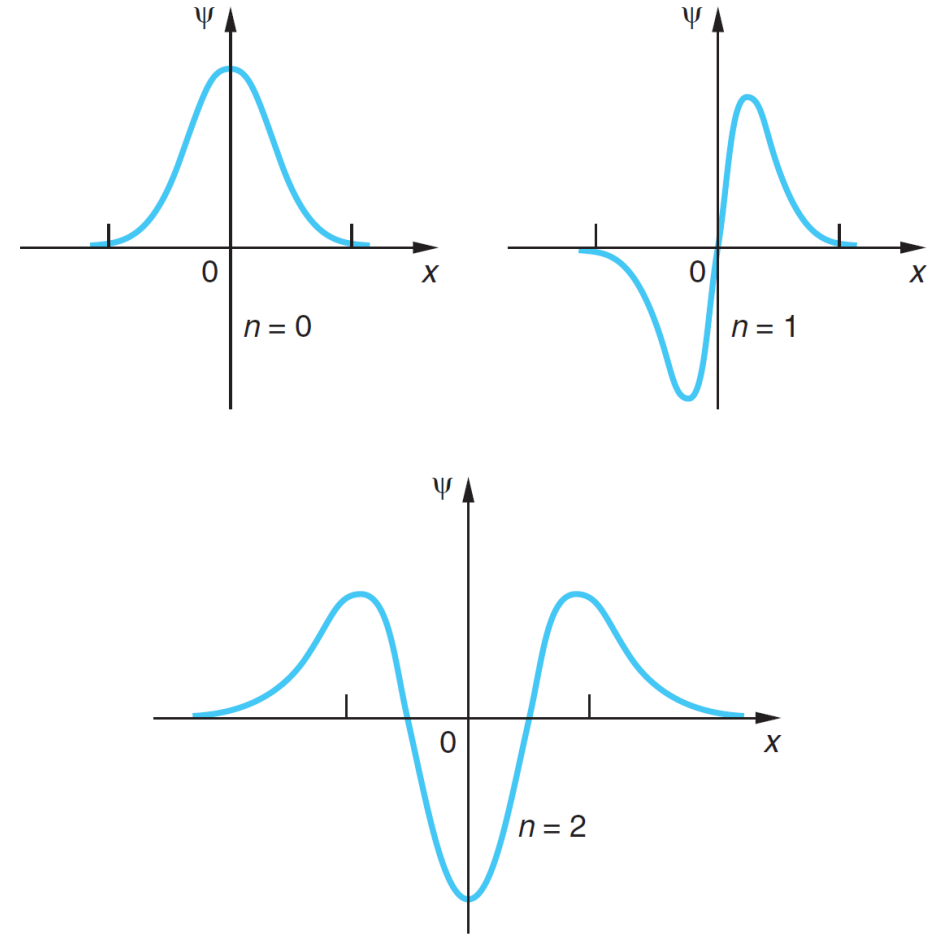
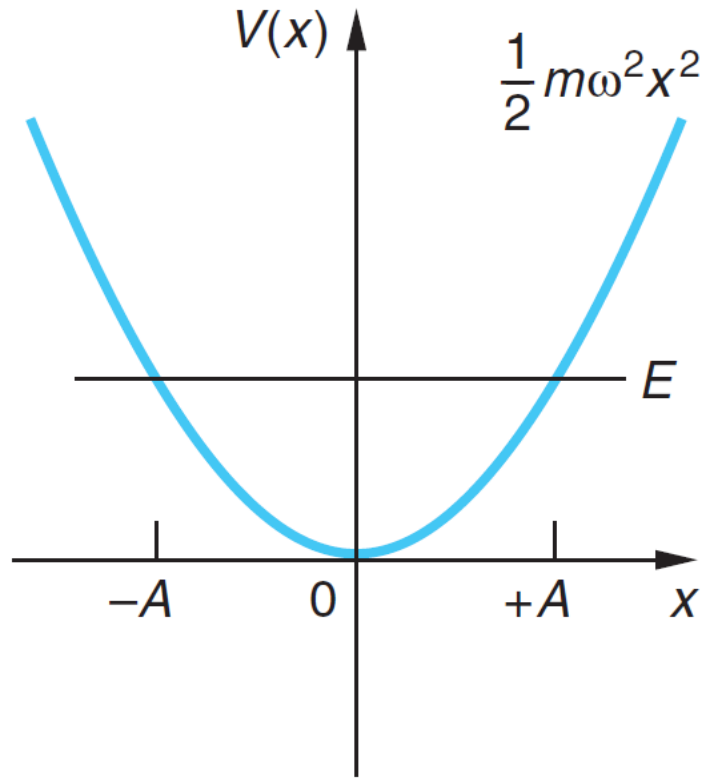
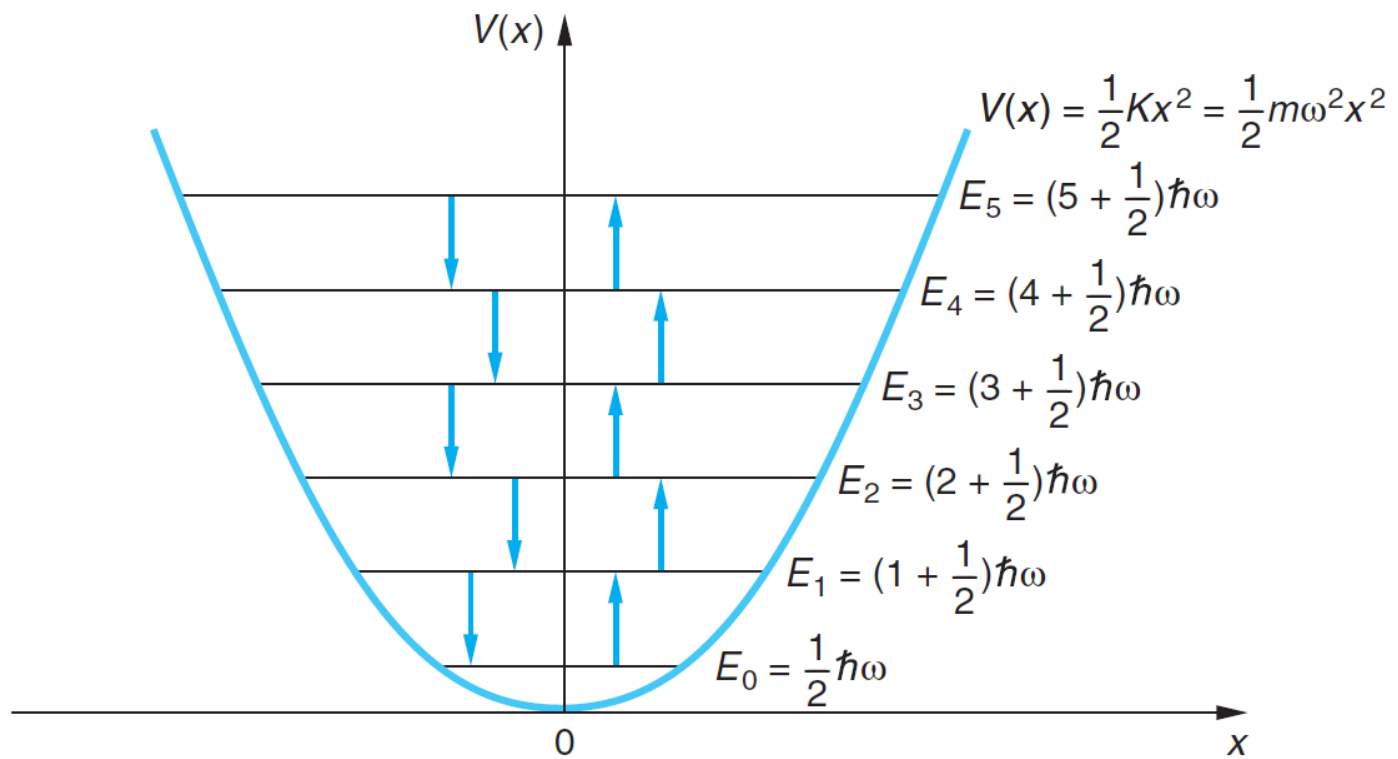
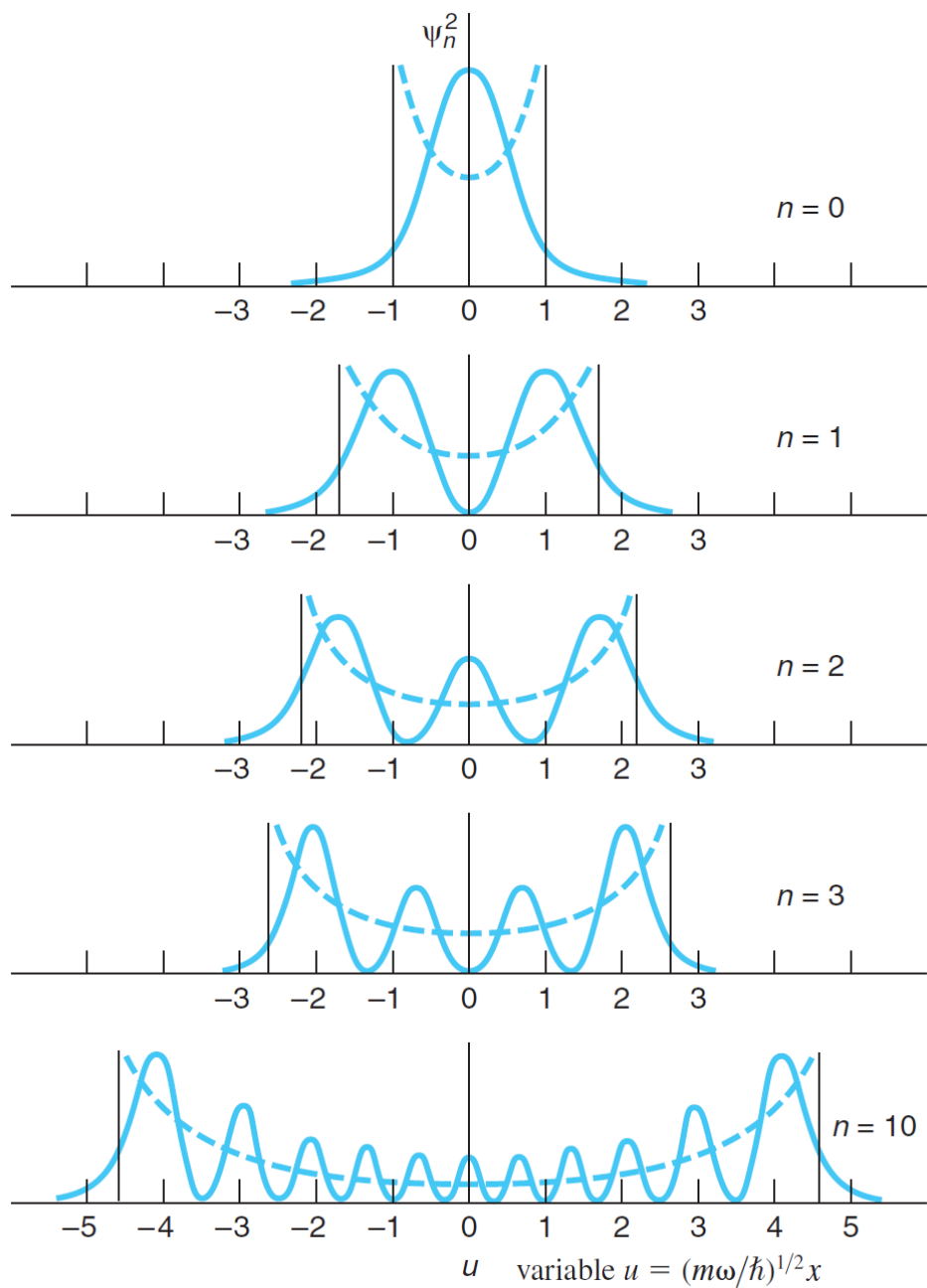


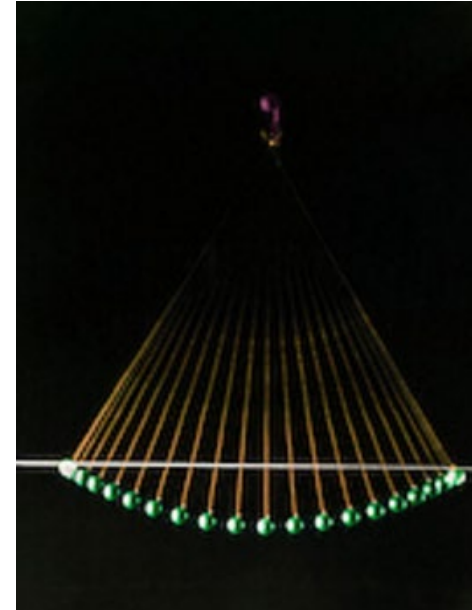
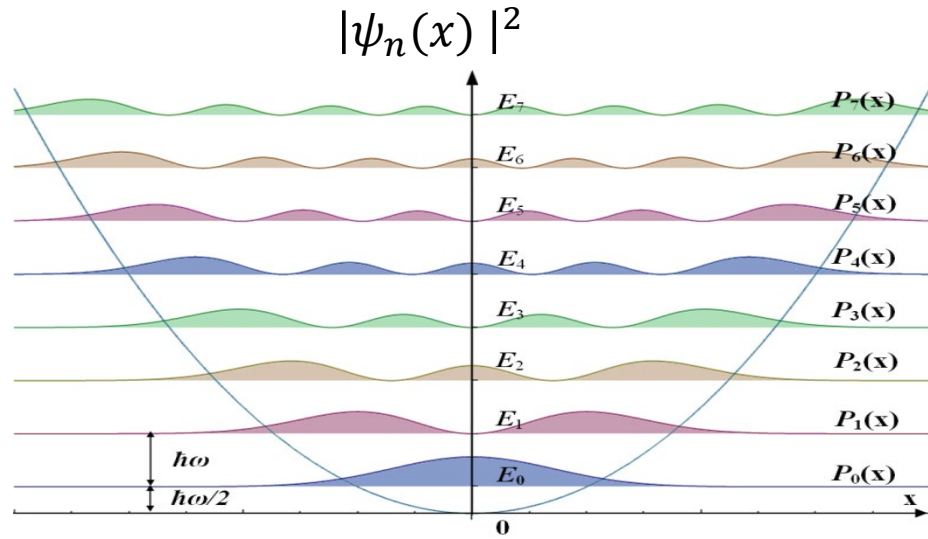
Harmonic Oscillator



$$-\frac{\hbar^2}{2m} \frac{\partial^2 \psi(x)}{\partial x^2} + \frac{1}{2} m \omega^2 x^2 \psi(x) = E \psi(x)$$

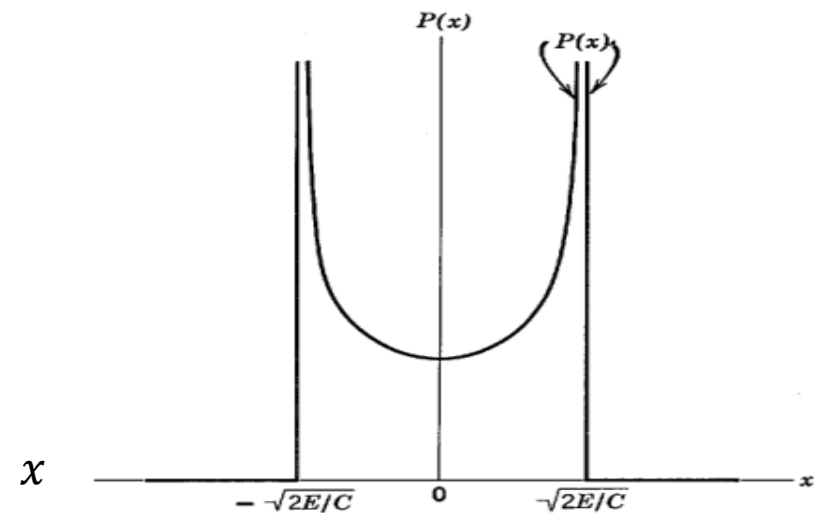
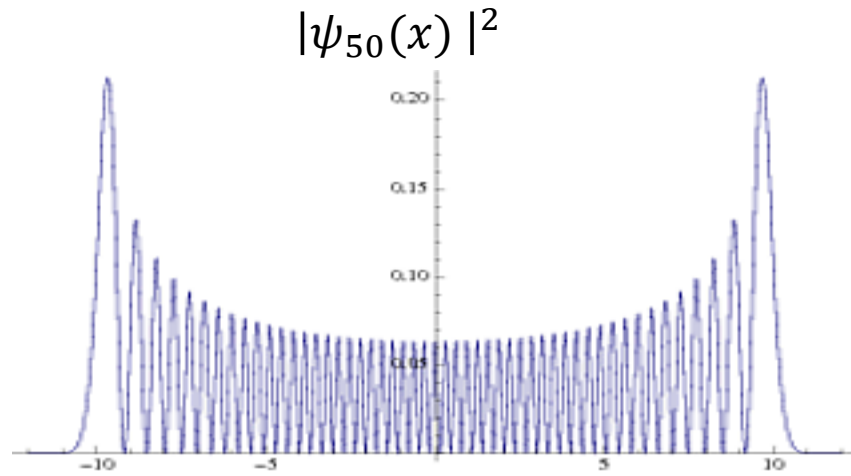


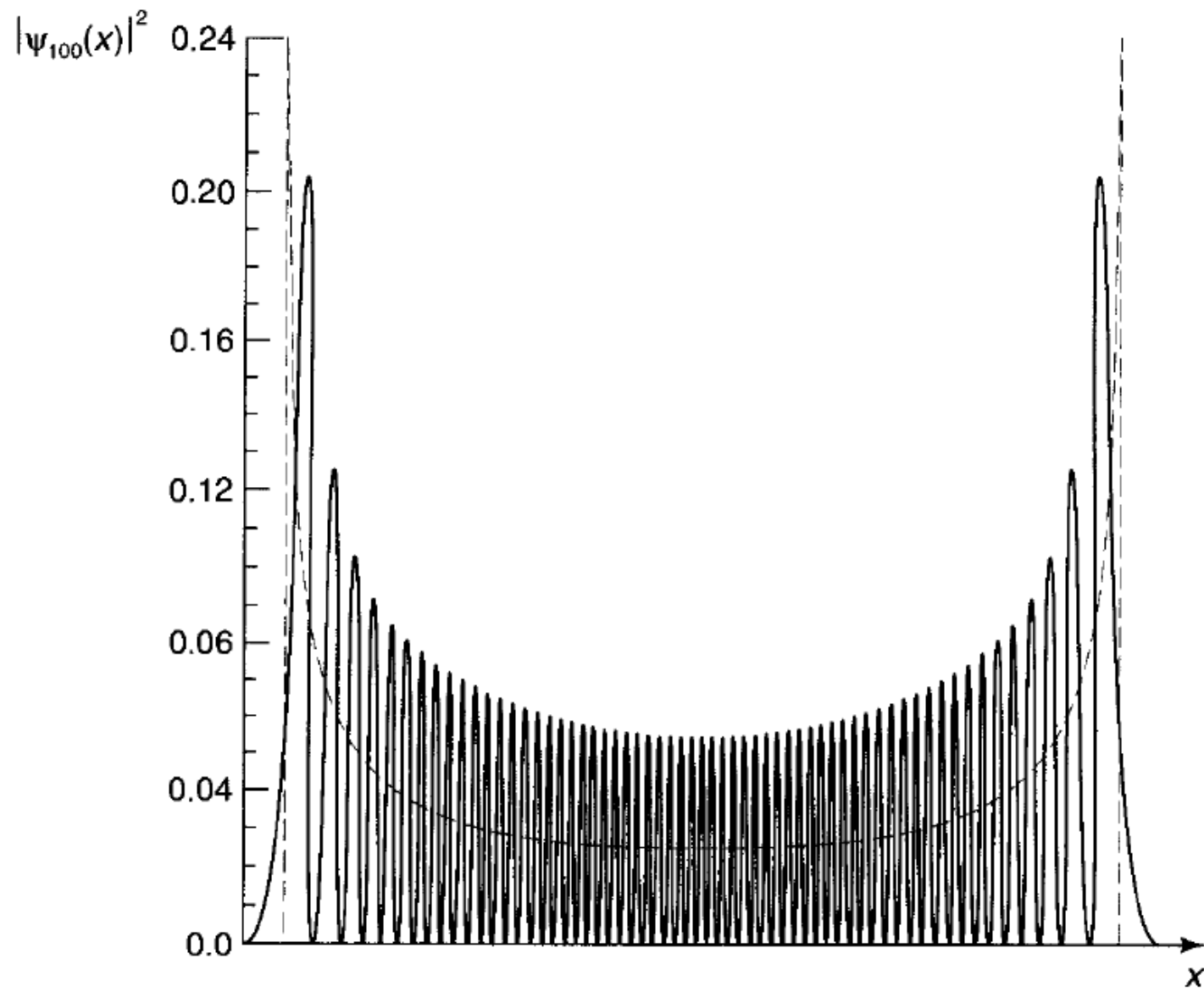
Harmonic Oscillator Probability Densities



<http://photo.photoshelter.com/gallery/HarmonicMotion/G0000ThpLmT3n/C0000lwydQPTow>

Classical harmonic Oscillator probability $P(x)$





(b)

Graph of $|\psi_{100}|^2$, with the classical distribution (dashed curve) superimposed.

Griffiths, QM