Chart, histogram

Description automatically generated

The wavefunction oscillates, which is expected. The wavefunction is more energetic as it moves along x, indicated by the increased frequency. It also becomes more compact, so the certainty in position is going to decrease as x increases. The amplitude of the function decreases as x increases, meaning it is converging to 0 as x approaches infinity.

Chart, histogram

Description automatically generated

The probability amplitude of the wavefunction decreases as x increases, showing that the particle has 0 probability of being at x = infinity, with decreasing probability as x approaches infinity. It is most likely to be found around x = 0, and it spends less and less time in each position as x increases because its momentum is increasing.