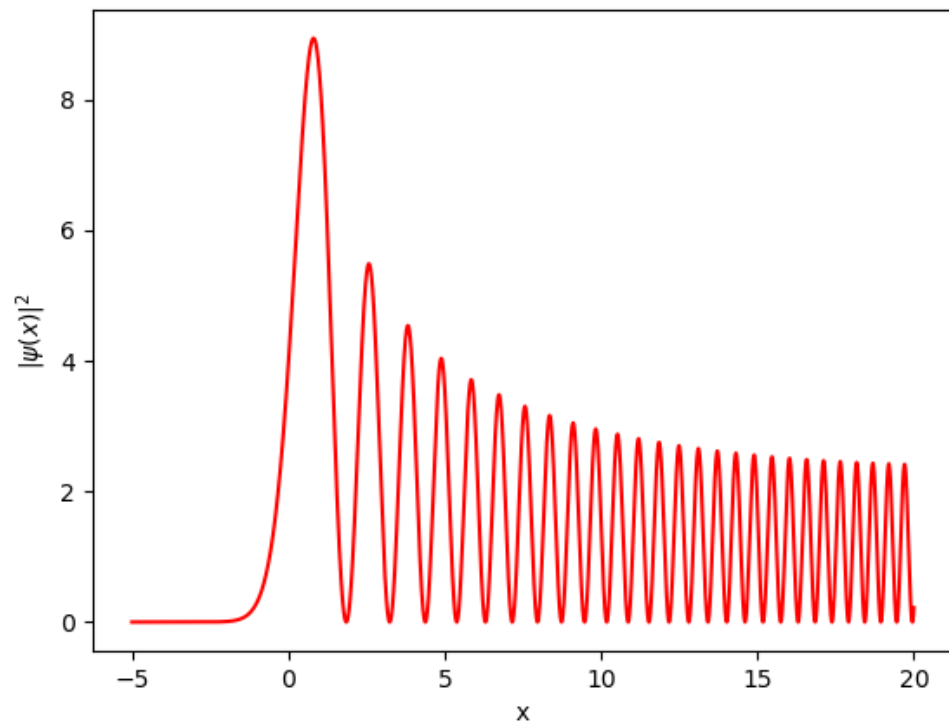


The wavefunction oscillates, which is expected. The wavefunction is more energetic as it moves along x , indicated by the increased frequency. It also becomes more compact, so the certainty in position is going to decrease as x increases. The amplitude of the function decreases as x increases, meaning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



The probability amplitude of the wavefunction decreases as x increases, showing that the particle has 0 probability of being at $x = \text{infinity}$, 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.