CHEM105H Unannounced Quiz 2 ***Name on back please…***
Please show all work and all equations to receive any credit

1. For a very small particle in a one dimensional box, compare the relative probabilities that the particle is in the **left quarter** of the box when the particle is in the n=1 level, the n=2 level, and the n=4 level. Draw a diagram to clearly support your answer.

2. Assuming that the small particle is an electron (mass = 9.109×10^{-27} kg) in a one dimensional box with a length of 300 pm, calculate the frequency of light emitted as the electron falls from the n=4 level to the n=2 level.