Central Forces
Finding an Electron Inside the Bohr Radius

For an electron in the $1s$ state of hydrogen,

$$\psi_{100}\left(r, \theta, \phi\right) = \frac{1}{\sqrt{a_0^3 \pi}} e^{-r/a_0},$$

1. Calculate the probability that this electron would be found within one Bohr radius of the center $(P_{r < a_0})$.

2. What is one thing you have learned from this activity that you want to remember?