

**Physical Chemistry
Recitation**

SESSION A: Normalizing wavefunctions.

Normalize the following wavefunctions.

- $\psi(x) = \frac{\sin nx}{x}$

- $\psi(x) = e^{-\alpha x^2}$

- $\psi(r) = re^{-\alpha r}, \quad 0 \leq r < \infty$

- $\psi(\theta) = e^{i\theta}, \quad 0 \leq \theta < 2\pi$