

Due Friday, Sept 17, 2010

Griffiths (2nd edition) Problems 1.9, 1.11

+ Additional problem:

Johnson 2.1: Let  $\psi(x) = Ax(1-x)$  for  $0 \leq x \leq 1$ , and  $= 0$  elsewhere, Find  $A$  so that the wavefunction is normalized. Compute  $\langle x \rangle$ ,  $\langle x^2 \rangle$ ,  $\langle p \rangle$ ,  $\langle p^2 \rangle$  and the corresponding uncertainties. Does this wavefunction satisfy the uncertainty principle?