PHYSICS 410 FALL 2010
Homework # 3 Sept 17, 2010

Due Friday, Sept 24, 2010

Problem 2.4 in Griffiths

Also additional problem:

Johnson 3.1 Let $\psi(x) = A\, x \exp(-ax)$ for $0 \leq x$ and $= 0$ for $x < 0$. Find A so that the wavefunction is normalized. Compute $< x >$, $< x^2 >$, $< p >$, $< p^2 >$ and the corresponding uncertainties in x and p. Does this wavefunction satisfy the uncertainty principle?

Extra credit: Griffiths problem 2.15.