

Physics 451: Homework #1

Due Tuesday, Sep 9, 5:00PM, 2008

Please make sure that homework is neat and logical with problem numbers marked. Add short comments to explain key steps. Please include references to textbook page numbers, output from Maple/Mathematica, or references other outside resources as appropriate, especially when you rely on these for intermediate steps. Place assignments in the 451 bin across from N373 ESC.

1.1

1.2

1.3 Note: $\int_{-\infty}^{\infty} e^{-u^2} du = \sqrt{\pi}$, $\int_{-\infty}^{\infty} ue^{-u^2} du = 0$, and $\int_{-\infty}^{\infty} u^2 e^{-u^2} du = \frac{\sqrt{\pi}}{2}$

1.5