

**Computational Physics / PHYS-UA 2000 / Problem Set #4**  
**Due October 1, 2024**

You *must* label all axes of all plots, including giving the *units*!!

1. Exercise 5.9 in Newman. Then: (c) Test the convergence by evaluating the choices  $N = 10, 20, 30, 40, 50, 60, 70$ .
2. Exercise 5.10 in Newman.
3. Exercise 5.13 in Newman. Then: (d) Perform the calculation using Gauss-Hermite quadrature (`scipy` can give you the right roots and weights to use). Can you make an exact evaluation (meaning zero approximation error) of the integral?