

Math 1A

Quiz 12 - November 23, 2009

Name:

1. Let $f(x) = e^{-x^2}$.

(a) Sketch the graph of the function $f(x)$, (to save time, just compute $f(0)$ and the limits at $\pm\infty$ and draw a reasonable sketch. You can figure out critical points if you have extra time.)

(b) Write down an approximation for the area under the graph of $f(x)$ from $x = 1$ to $x = 4$ using 5 rectangles with left endpoints. (No need to simplify your answer)

2. Evaluate the integral

$$\int_{-2}^5 |x| dx$$

by interpreting it as an area.

3. Use Newton's method to approximate $\sqrt[4]{83}$ using an initial guess of $x_1 = 3$.