Math 163 — Quiz 06

Thursday October 25th 2012

Instructions Remember to show all your work so you can get partial credit.

1. How many partitions n of the inteval $[0, 1]$ does one need to take to in order to approximate the integral $\int_0^1 e^{x^2} dx$ within $1/1000$ using the midpoint rule. (Hint: $E_M = \frac{K(b-a)^3}{24n^2}$ where K is the maximum of $|f''(x)|$ on the interval $[a, b]$.)