Name _____

MATH 221A Multivariate Calculus Spring 2002 Project #7

Instructions

You are encouraged to work with others on this project. As with all writing you should work out the details in draft form before writing a final solution. You should write your solution in paragraph form using complete sentences that incorporate all symbolic mathematical expressions into the grammatical structure. You should include enough detail so that a reader can follow your reasoning and reconstruct your work. You should not show every algebraic or arithmetic step. You should do your own writing of the solution even if you have worked out the details with other people. All graphs should be done carefully on graph paper or using appropriate technology. The project is due at the beginning of class on Tuesday, April 9.

Estimate the value of the double integral

$$\iint_R e^{-x^2y^2}\,dA$$

where $R = [0,1] \times [0,2]$. Use 10 subintervals of equal length for the x-interval and 10 subintervals of equal length for the y-interval. Strive for the most accuracy you can obtain with these numbers of subintervals.