

Math 1A
Quiz 9 - October 28, 2009

Name:

1. Let $f(x) = xe^{-x^2}$. Answer the following questions about the graph of $y = f(x)$. Please mark your answers **clearly**, and show your work.
 - (a) What are the x and y intercepts of the graph?
 - (b) What are the horizontal and vertical asymptotes of the graph.
 - (c) What are the critical points? For each, say if it is a max / min. (Briefly say why)
Is there a point of inflection?
 - (d) On what intervals is the function increasing and decreasing
 - (e) On what intervals is the function concave up and concave down.
 - (f) Sketch the graph.