Name.....

UID.....

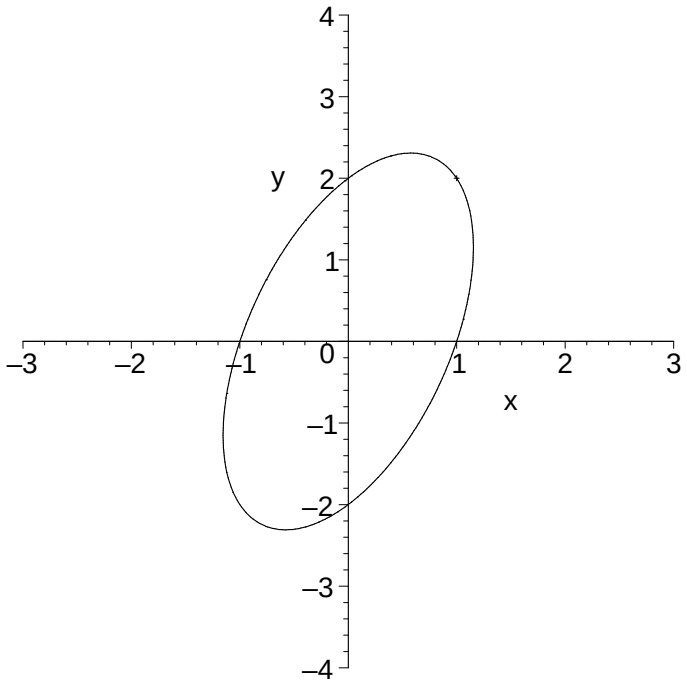
Math 1210-3

Quiz 6

February 22, 2008

Show all work for complete credit! There are two sides to this quiz!

This quiz is about the graph of the equation $4x^2 - 2xy + y^2 = 4$. Here is a computer picture of the graph:



1a) Use algebra to show that the point (1, 2) is on the graph shown above.

(2 points)

1b) Use implicit differentiation to find the slope of this equation graph, at the point (1, 2) .

(4 points)

1c) Find the slope-intercept equation of the tangent line at the point (1, 2), for the graph shown on the previous page.

(2 points)

1d) Sketch the tangent line you found in (1c), onto the graph at the top of the first page. Make sure it has the correct slope and x and y intercepts.

(2 points)