Name..

UID..

Math 1210-2
Quiz 5
October 5, 2007

Show all work for complete credit!

1) Consider the graph of the equation

$$x^2 + 3\,x\,y + y^2 = -1$$

1a) Show that the point (2,-1) is on the graph

(1 points)

1b) Use implicit differentiation to find the slope y′ of the graph above, at the point (2,-1).

(3 points)

2) The bottom of a ladder is sliding a away from a wall along (wet) level pavement, while the top slides down the wall. The ladder is 13 feet long. At the instant when the bottom of the ladder is 5 feet from the wall it is sliding away at a rate of 2 feet/second. How fast is the top of the ladder sliding down at that instant?

(6 points)