Quiz 1 for Calc4 on Feb. 5, 2014

Name:_____ **RUID:**_____

Email:_____

(1) (2 pt) Either Type I Homework Problem 1.1.2 or Type II Homework Problem.

(2) (4 pt) Check if the function

$$y(t) = e^t + t$$

is the solution of the initial value problem

$$y'' - y' = 0, y(0) = 1, y'(0) = 1$$

(3) (4 pt) The following differential equation

$$y' = -\frac{1}{4}(y-1)(y-5)$$

defines a direction field on the plane. Draw the line elements on the points given in the graph at the back of the page.

[Warning: Draw in scale! Otherwise the differential equation would not be described accurately. Here I listed some of the positive slopes. You know how to draw the nonpositive ones]