MATLAB Project 3
Function and Tangent Graphs
Due 10-26-05

Instructions:

For this assignment, you will add on to your previous Matlab program that found the instantaneous rate of change of a function at a point. Your new program should use this information to then graph the function and the tangent line at the given point. If your previous program was not working completely correctly, you may modify the program posted on the assignments page.

***Details*:**

- The first line of any m-file you submit should be a comment containing your name. The second line should be the name of the assignment, in this case "% Function and Tangent Graphs".

- You may use either a symbolic expression or an m-file to define your function. All other references to the function in the program should call that definition, so you only have to change it once to analyze different functions.

- After you define the function, the next two executable lines of your m-file should define 1) the domain value of the function at which the instantaneous rate is to be determined, 2) the variable "epsilon" to be the bound on the error, and 3) the domain over which the graph is to be plotted.

- You will need to use the "`hold on`" command so that you can plot both the graph of the function and the graph of the tangent line.

- Recall that to plot a graph over the domain interval [a,b] you use the following syntax:

For a symbolic expression	For an m-file function

`ezplot(f,a:b)`	`x=a:.01:b;`
	`y=f(x);`
	`plot(x,y)`

- E-mail your code to vicki@mathpost.asu.edu by the beginning of class on Wednesday, October 26, 2005.