8/29/2000 MA303 Calculus I Name:_____
Dr. Lunsford Quiz 1 (20 Points Total)

Neatly show ALL of your work and CLEARLY indicate your answers. Use the back of the page if necessary.

I. Let $g(x) = 2 - 2x + x^2$. Find and simplify each of the following (9 points total):

a. $g(-3) =$
(2 points)

b. $g(1-x) =$
(3 points)

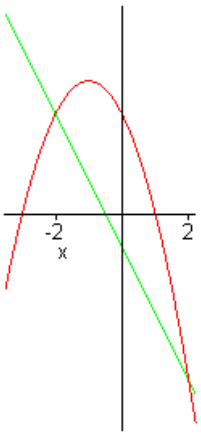
b. $\dfrac{g(x+\Delta x) - g(x)}{\Delta x} =$
(4 points)

II. To the right you are given the graph of $f(x) = 3 - 2x - x^2$ and a line that intersects the graph at $x = -2$ and $x = 2$. Answer each of the following (7 points total):

a. Find the zeros of the function $f$ and clearly show the zeros on the graph. (3 points)

b. Find the equation of the line. (4 points)

Graph for Problem II




III. A particle's position (in inches) at time $t$ (in seconds) along a path is given by the function $p(t) = t^2/2 + 1, 0 \le t$. Find the average velocity of the particle from time $t = 0$ to time $t = 3$ seconds. Draw the line whose slope represents this average velocity on the graph to your right. (4 points)

Graph for Problem III