KEY

Math 125-Quiz 7[1]
September 19, 2011

You have ten minutes to complete this quiz.

1. What is the difference between the following two statements

   - $$\lim_{x \to a} f(x) = L$$
   - $$f(a) = L$$

$\lim_{x \to a} f(x) = L$: for values of x near a, $f(x)$ takes on values near L

$f(a) = L$ means that at $x = a$ $f(x) = L$

2. For the graph shown on the board, find each of the following values, or explain why they don't exist.

   (a) $\lim_{x \to 1^+} f(x) = -1$

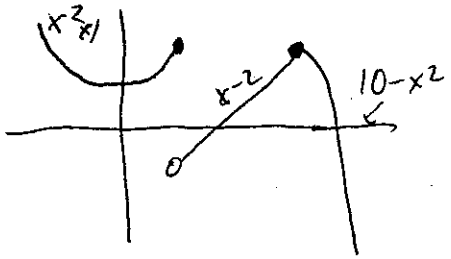
   (b) $\lim_{x \to 1^-} f(x) = 2$

   (c) $\lim_{x \to 1} f(x)$ DNE (two sided limits aren't equal)

   (d) $\lim_{x \to 3^+} f(x)$ $10 - 3^2 = 1$

   (e) $\lim_{x \to 3^-} f(x)$ $3 - 2 = 1$

   (f) $\lim_{x \to 3} f(x) = 1$ Both limits are equal



[1] You are excused to leave when you're finished with this quiz.