Calculus I **Quiz 1–003** Name: _____

D. P. Story, Spring 2015 SID: _____

Instructions: (10 points) Solve each of the following problems without error. *Show all details.* Box in your answers. Use good notation, you *will* be marked off for bad notation. **Note:** The value of a limit can be a number, the symbol $+\infty$, the symbol $-\infty$, or may be labeled DNE (for "does not exist").

(4^{pts}) **1.** Compute $\lim_{x\to -1} \dfrac{4x^2+x}{x}$

(3^{pts}) **2.** Define the function $f(x) = \begin{cases} 2x^3-1 & x<-2 \\ 2-x^2 & x\geq -2 \end{cases}$. Compute $\lim_{x\to -2^-} f(x)$, show the details of your reasoning.

(3^{pts}) **3.** Compute $\lim_{x\to 2} \dfrac{1-x}{(x-2)^2}$