Math 114 Spring 2017
Calculus I HW 4
Due Friday, February 17

1. Compute from the definition $\lim_{x\to 2^+} \frac{1}{x-2}$.
2. Compute from the definition $\lim_{x\to 5} \frac{x-2}{x-5}$.
3. ($\star$)Compute from the definition $\lim_{x\to -3} \frac{-1}{(x+3)^4}$.
4. From the definition, compute $\lim_{x\to +\infty} \frac{x+1}{x+3}$.
5. From the definition, compute $\lim_{x\to +\infty} \frac{1+x}{x^2}$
6. ($\star$)From the definition, compute $\lim_{x\to -\infty} \frac{x^2}{x+1}$.
7. Explicitly naming the rule used in each step, calculate $\lim_{x\to 0} x^2 - 3x + 5$
8. Explicitly naming the rule used in each step, calculate $\lim_{x\to 4} \sqrt{x} + \sqrt[3]{4+x}$