Math 141, Problem Set #5
(due in class Fri., 10/11/13)

Note: To get full credit for a non-routine problem, it is not enough to give the right answer; you must explain your reasoning.

Stewart, section 1.6, problems 2, 14, 20, 22, 58. (Note that for problems 14 through 22, you should permit answers like \( \infty \) and \( -\infty \) as limits, even though these would have been disallowed back in sections 1.3 through 1.5.)

Also:

A. If we know \( \lim_{x \to a} f(x) = -\infty \) and \( \lim_{x \to a} g(x) = -\infty \), what if anything can we conclude about \( \lim_{x \to a} f(x)g(x) \)? Explain. (Epsilons and deltas are not required.)

B. If we know \( \lim_{x \to a} f(x) = \infty \) and \( \lim_{x \to a} g(x) = 0 \), what if anything can we conclude about \( \lim_{x \to a} f(x)g(x) \)? Explain. (Epsilons and deltas are not required.)

Please don’t forget to write down on your assignment who you worked on the assignment with (if nobody, then write “I worked alone”), and write down on your time-sheet how many minutes you spent on each problem (this doesn’t need to be exact).