MAT 137
Problem Set A

This problem set is intended to help you prepare for Test 1. It is not comprehensive: it only contains some problems that were not included in past problem sets or in past tutorials. You do not need to turn in any of these problems.

For further preparation review pre-class quizzes, lecture notes, Problem Set 1, Tutorials 1 through 3, and Unit 1 and 2 practice problems.

Problems

1. Let f be a function. Let $a, L \in \mathbb{R}$. Assume that f is defined on some open interval around a, except maybe at a. As you know, the definition of the statement $\lim\limits_{x \to a} f(x) = L$ is

   (1) For every $\varepsilon > 0$, there exists $\delta > 0$ such that $\quad 0 < |x - a| < \delta \implies |f(x) - L| < \varepsilon$.

   Below is a list of several statements.