Quiz 1

MATH 140B

MSTB 124 NAME (1 POINT):

Problem 1. (1 point) Let f be a function on a set S. Define what it means for f to be uniformly continuous on S.

Problem 2. (2 points) Give an example of a function that is continuous but not uniformly continuous

Problem 3. (6 points) Suppose $\lim_{x\to 0} f_1(x) = 0$ and $\lim_{x\to 0} f_2(x) = \infty$. What can $\lim_{x\to 0} f_1(x)f_2(x)$ be equal to? (i.e can it be equal to $\infty, -\infty$, anything in between?). Prove your assertions.