Math 413 Fall 2005
Due on 8/30
Unless otherwise stated all assignments are from Strichartz's book (The Way of Analysis)

Assignment 1

1. Page 7, Problems 1.a, 1.b, 1.c, 2.c, 2.f, 3.b.

2. Show that the following statement is false: "For every integer n, $n^3 \geq 9n$."

3. Let A, B be two statements. Construct a truth table for the statement "not A or B" and conclude that this statement is logically equivalent to "A implies B".

4. Page 13, Problems: 2, 3, 4, 7.

5. We say that a function $f : A \to B$ is *one to one if for each b in B there is at most one a in A for which $f(a) = b$. Give a formulation in terms of quantifiers of the statement "The function $f : A \to B$ is one to one", and also of the statement "The function $f : A \to B$ is not one to one". Give an example of function which is not one to one.*