Duke Math 431
Spring 2015

Homework 1

Due Friday, January 16 at the beginning of class

Reading.
Sections 1.1, 1.2, and 1.3.

Problems.
Section 1.1: #2, 3, 4, 10, 11.

Section 1.2: #1(d,e), 3, 8.
For #1(d), there's hardly any work to show. For example, a perfectly good answer to (b) would be $S \cap T = (1, 2) \cap [-2, 2] = (1, 2)$.
For #3, it suffices to show $x \in A \cap (B \cup C)$ if and only if $x \in (A \cap B) \cup (A \cap C)$.
For #8, it helps to let $p(x) = a_n x^n + a_{n-1} x^{n-1} + \ldots + a_1 x + a_0$ be an arbitrary polynomial and then write what $I(p)(x)$ is.

Reflection. *Please put on a separate piece of paper. Four sentences total is fine, else write more if you choose.*
What's your (possible future) major/minor, or graduate program? What's your year?
Why are you taking this class? ("It's required for my degree" is a sufficient answer.)
What's your planned next step? IE next class, job, grad program, etc.
What are some of your interests/hobbies?