CSE191, Spring 2011 Assignment 8 Due Mon. 4/4, in class

Reading: The week of Mon. 3/28 will cover functions and some of summations. This problem set parallels Prof. Rapaport's HW8 and part of HW9.

(1) Rosen, page 120, problem 26. Conclude no-less and no-more than what follows. (6 pts.)

(2) Rosen, page 120, problem 32. Explain why they are not the same, and then explain why they are essentially the same. (6+3=9 pts.)

(3) Rosen, page 131, problem 18(c,d,e). First convert the set expressions into predicates, and then use propositional logic. For example, (b) is translated as: Show that

$$\{ x : x \in A \wedge x \in B \wedge x \in C \} \subseteq \{ x : x \in A \wedge x \in B \}.$$

This is true **because** $a \wedge b \wedge c \longrightarrow a \wedge b$ is a tautology. That is, your directions are to translate the set relations into propositions, and prove the relation by examining the propositions. (9+9+9 = 27 pts.)

(4) Rosen, page 131, problem 26. (3+3+3=9 pts.)

(5) Rosen, page 131, problem 48(c,d). Show your work, i.e., give reasoning as well as a "college answer." (6+6 = 12 pts.)

(6) Rosen, page 147, problem 14(b,d). (6+3 = 9 pts.)

(7) Rosen, page 147, problem 24 (6 pts., mainly just understanding what the terms mean)

(8) Rosen, page 147, problem 32 (12 pts., for 90 on the set).