Discrete Math Homework 9
Due Wednesday, March 15 at the beginning of class

General instructions:

- Use standard size paper (8.5 by 11).
- Answer each question in order using a single column.
- Be neat. If we cannot read your solution it is wrong.
- Show your work. If you just write an answer, you will get minimal credit even if the answer is correct.

Rosen section 5.1

Question A) Use a proof by induction to show that $2+4+6+\cdots+2n=n(n+1)$ for all positive integers.

Question B) Rosen 5.1 Exercise 6 (p. 329)

Question C) Rosen 5.1 Exercise 10 (p. 330)

Question D) Rosen 5.1 Exercise 20 (p. 330)

Question E) Rosen 5.1 Exercise 32 (p. 331)

Question F) Rosen 5.1 Exercise 49 (p. 331)

You may choose to solve one (and only one) of the following Extra Credit Problems. If you submit more than one, only the first will be graded.

Extra Credit 1) Rosen 5.1 Exercise 30 (p. 330)
Extra Credit 2) Rosen 5.1 Exercise 68 (p. 330)