## Homework 2

**Due Date**: April 22, 2004 **Points**: 100

## **Questions**

Some questions ask you to justify statements made in proofs, or to prove statements. Please make your justifications rigorous rather than justifying what is happening at a high level.

- 1. (10 points) Text, section 1.12, exercise 8
- 2. (15 points) Text, section 2.8, exercise 6
- 3. (20 points) Text, section 3.9, exercise 1 (be rigorous here).
- 4. (25 points) Text, section 3.9, exercise 3 (note the word "prove"; this requires a proof, not an argument)
- 5. (10 points) Text, section 4.11, exercise 8
- 6. (20 points) Text, section 5.8, exercise 6 (note the word "prove"; this requires a proof, not an argument)

## **Extra Credit**

- 7. (20 points) Text, section 3.9, exercise 2
- 8. (20 points) Text, section 3.9, exercise 6