Due at the beginning of class on March 14, 2006.

If you cannot come up with algorithms that run in the required time, then provide (correct) slower algorithms for partial credit. Write your answers using pseudo-code in the same style as the textbook. These make the algorithm description precise, and easy to read (as opposed to code in C or some other language).

The problems should be done by yourself: without any collaboration, or help from sources such as the Web.

**NOTE:** You must prove the correctness of your algorithms.

1. Read and understand Section 5.5. (This problem will not be graded, but problems of the type considered in Section 5.5 may be asked in homeworks and/or exams.)

2. Problem 2, page 246. (10 points)

3. Problem 6, page 248. (10 points)

4. Problem (For graduate students only.) Problem 7, pages 248-249. (10 points)