Institut for Matematik & Datalogi
Syddansk Universitet

April 25, 2003
JBJ

DM69 — Weekly note 11

Handed out material Friday, April 25, 2003

Chapters 26 and 27 from the book "The design and analysis of algorithms" by Dexter C. Kozen.

Material covered in week 17

Sorting Networks. Cormen chapter 27.

Exercises on May 1, 2003

Together we will cover Chapter 30 in Cormen on the fast Fourier transform.

Lecture on May 2, 2003

Complexity of Counting problems. Kozen Chapter 26+27.

Exam questions

For the stuff we have covered until now, the following are the possible questions (main questions).

1. Shortest paths in digraphs.
2. The maximum (s,t)-flow problem and the minimum (s,t)-flow problem.
3. Polynomial algorithms for maximum flows.
4. Minimum cost flows.
5. The assignment problem and the transportation problem.
6. Matchings: characterizations and algorithms.
7. Matroids and the greedy algorithm.
8. Matroid intersection and matroid partition: algorithms and applications.
9. Scheduling: basic concepts and examples of proofs.
10. PRAM algorithms.
11. Sorting Networks
12. The fast Fourier transform
13. Complexity of counting problems