

TMA 965 : Discrete Mathematics D3-fall, 03

Homework 5

You are strongly encouraged to do as many of these exercises as you can before the exercise session on October 2nd. (One learns the material much better by working on the problems rather than just listening to the solutions presented). The second part of the homework may be handed in on October 2nd. The total possible credit for all homeworks handed in is 10 %. It is not mandatory to hand it in.

The following rules are in force for all homework exercises which are handed in.

1. Explain (prove) all of your answers.
2. You are strongly encouraged to cooperate with other students to figure out how to solve the problems but the final formulating and writing up of the solutions must be done yourself. Inform me whom you have worked with.
3. Save (of course) all your homeworks together with my comments.
4. Homework after the due date will not be accepted.

Warm up problems

[Although I call them “warm up” problems, they are not necessarily always much easier than the exercises to be handed in. The point is to give you more exercises to practice on so that you can understand the material better.]

1. Exercise 10.6.1-10.6.5 (not 3).
2. Exercise 20.4.3-20.4.4.

3. 20.6.1.

4 If σ is a permutation, show that the order of σ is the least common multiple of the cycle lengths of σ .

5. Exercise 21.4.1.

6. Exercise 21.4.2.

May be handed in Tuesday October 14

1. Exercise 20.8.4.

2. Exercise 20.8.5.

3. Exercise 21.4.3.

4. Exercise 21.4.4.