Algebra 2010-Aalborg University

11th Lecture: Tuesday October 19th, 8:15-12:00 at room G5-112.

- 8:15-8:45 Repetition from last lecture. The Chinese remainder theorem for groups. Symmetric group. Cycles. Simple transpositions and Bubble sort (pages 77–83).
- 8:45-10:45 Work in groups. Exercises from [Lau], 2.11 (page 104)+ 2 other exercises: 32, exercise A, 39 (hint: use exercise 15(iii) for the second question), exercise B, some exercises from previous lectures that you did not solved yet.

  Exercise A: Write a permutation that is not a k-cycle for any k?

  Exercise B: Compute the order of the permutation (1 2 3 4)(5 6 7)(8 9). Compute the order of the permutation (1 2 3 4)(2 6 7)(8 9). (Hint: the first one is easy, for the second one we have to do computations)
- 10:45-12:00 Lecture: Symmetric group. Simple transpositions. The alternating group (pages 83–86).

Best regards,

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