

Symmetric groups, combinatorics and characters 2010

Informal exercise session on 17. february at 11.00 am

These exercises are not compulsory

From **Sagans book [SA]**:

Exercises 5 and 7 on p. 49

From the book by **Andrews og Eriksson [AE]**:

Exercises 13-15 on p. 16

Exercise 20 on p. 17

Exercise 41 on p. 28

Exercises related to the **Compendium [OC]**:

Exercise 1: List exactly one element from each conjugacy class of the alternating group A_6 .

Exercise 2: For $m, n \in \mathbb{N}$, let $p(n, m)$ be as in Definition 2.1 of the kompendium. Show that if $m \leq n$, then $p(m + n, n) = p(m)$.

Exercise 3 Give a bijection to show that the number $a(n)$ of partitions of n , where only odd parts may be repeated equals the number $b(n)$ of partitions of n , where each part is repeated at most 3 times.