

# Homework 11A

*This is a voluntary homework. Solving it, you can gain extra points to the exam. Hand in before the next lecture i.e. 6 Dec 16:15 (either on my desk in the classroom or send to my e-mail). You are eligible for getting points only if you hand in on time and only if it is solved (more or less) correctly.*

**Problem.** Prove that

$$\binom{m+n}{k} = \sum_{j=0}^k \binom{m}{j} \binom{n}{k-j}$$

for every  $n, m \in \mathbb{N}_0$ .