Homework 6A

This is a voluntary homework. Solving it, you can gain extra points to the exam. Hand in before the next lecture i.e. 1 Nov 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. Recall what does it mean that a fuction is *injective*, *surjective*, and *bijective*. Write down formal definitions. For any function $f: A \to B$, prove that if you consider it as a relation and take its inverse $f^{-1} = \{(y, x) \mid f(x) = y\} \subset B \times A$, then f^{-1} is a function $B \to A$ if and only if f is bijective.