**Automated Theorem Proving, SS 2014. Homework 4 (due April 17, 2014)**

In the version of propositional logic with conjunction and disjunction applied to sets of formulas, do the followings:

1. Find the truth value of the empty disjunction. (In the seminar we found the truth value of the empty conjunction).
2. Find the truth value of the disjunction applied to a singleton set. (In the seminar we found the truth value of the conjunction applied to a singleton set.)
3. Prove $\neg \bigwedge \Phi \equiv \bigvee \bar{\Phi}$. (In the seminar we proved the dual.)