

Logic 1, WS 2013. Homework 6, given Dec 5, due Dec 12.

1. Find the sequent rules for conjunction using the sequent rules for negation and disjunction.
2. Find the sequent rule for implication in the goal using the rules for negation and disjunction. Find the sequent rule for equivalence in the goal using the other sequent rules.
3. In the version of propositional logic with conjunction and disjunction applied to sets of formulae, find the sequent rules for disjunction. Study what happens to empty disjunction and find the rules for the truth constant \mathbb{F} .
4. Construct the sequent proof of:

$$(A \vee B) \Rightarrow C \equiv (A \Rightarrow C) \wedge (B \Rightarrow C).$$