

Logic 1, WS 2008. Homework 2, given Oct 22, due Oct 29

1. Prove by definition:

For any propositional formulae $\varphi_1, \dots, \varphi_n, \psi$,

if $\varphi_1, \dots, \varphi_n \models \psi$, then the formula $(\varphi_1 \wedge \dots \wedge \varphi_n) \Rightarrow \psi$ is valid.

2. Write one or more equivalences which can be used in order to eliminate \Leftrightarrow from logical formulae.

3. Develop the equivalences for expressions with \Rightarrow and \Leftrightarrow containing truth constants.