

Homework Assignment 9

1. Say that $\Gamma \Vdash A$ and $\Gamma \Vdash \neg B$. Show that $\Gamma \Vdash (\neg A \vee B) \rightarrow Q$
2. Prove Metatheorem 27 and 29 on page 267. (See the solved exercises for examples of proofs of such metatheorems.)
3. Chapter 6 exercise 1 a), b), c), d), f), j)
4. The game of "rock, paper, scissors" is familiar: Two players simultaneously make one of three signs: rock, paper or scissors. Rock beats scissors, paper beats rock, scissors beats paper. If the two players make the same sign, it's a tie. Formalize this game, with axioms for a) what are the possible configurations of moves. b) who wins under what circumstances and when is it a tie.