

Problem Set 2

September 14, 2018

Abstract

Here are some simple exercises to teach *evidence semantics*.

Unlike the tableaux rules for *truth value semantics*, if we fail to find evidence for a proposition using the computational meaning of the logical operators, there is no guarantee that it is not realizable by other means. We will explore some consequences of this fact later. Meanwhile, please comment on what this means in practice.

1 Problems – please produce evidence for these propositions

1. $(\neg P \vee \neg Q) \Rightarrow \neg(P \& Q)$.
2. $((P \Rightarrow Q) \& (P \Rightarrow R)) \Rightarrow (P \Rightarrow (Q \& R))$.
3. $\neg(P \vee Q) \Rightarrow \neg(P \& \neg Q)$.
4. $\neg(A \vee B) \Leftrightarrow \neg A \& \neg B$.
5. $\neg(A \& B) \Leftrightarrow (\neg A \vee \neg B)$.