Opgaven Week 8

October 27, 2004

Opgave 1

We consider the proof of Bernardi's Lemma. Specify at which point is it used that A is modalized in p?

Opgave 2

This exercise refers to Boolos. Compare Line 2-4 of Page 107 to fixed point Number 4 on Page 105. What is going on here? Check the correctness of a Fixed Point of $\neg\Box\neg p$.

Opgave 3

This question refers Smullyan. Prove in PE the following theorems.

- $A \supset A$
- $\sim\sim A \supset A$
- $v_0 = v_0$
- $v_0 = v_1 \rightarrow v_1 = v_0$
- $v_0 = v_1 \wedge v_1 = v_2 \rightarrow v_0 = v_2$
- $v_2 \cdot 0 = 0$

Opgave 4

Give the base-three representation of 27 and of 215.

Opgave 5

Calculate the Gödel number of '$1 + 1 = 2$'

Opgave 6

Artithmetize axiom L_5.