

Homework 3

Philosophy 113

Spring, 2006

April 19, 2006

Due, April 26, in class

1. Use mathematical induction to give a rigorous proof of 28.3.
2. Using the reasoning in the induction step of the proof of the Deduction Theorem, convert the syntactical consequence:

$$\{(p' \supset p''), (p'' \supset p''')\}, p' \vdash_{\text{PS}} p'''$$

into the syntactical consequence:

$$\{(p' \supset p''), (p'' \supset p''')\} \vdash_{\text{PS}} p' \supset p'''.$$

3. Hunter claims on p. 110 that under the supposition that Γ' is p-inconsistent, and given the way in which Γ_n is constructed, $\Gamma_n \vdash_{\text{PS}} A$ and $\Gamma_n \vdash_{\text{PS}} \sim A$. Try to prove this claim. If you are unable to prove it, state what stops you from completing the proof.