## Phil 428/526, Fall 2013

## Assignment \#2

This assignment is due before the beginning of class on Monday, November $4^{\text {th }}$. You can do this by either submitting them electronically anytime prior to class, or by giving me paper copies at the beginning of class. I will go over some portion of the assignment in class that day. Please do your work independently. (The three assignments are worth $33 \%$ of your grade if you are in 428 , and $25 \%$ of your grade if you are in 526). Assignments can be handwritten if you wish. Try to be reasonably neat. (Note: if you submit your assignments electronically, and if you use WordPerfect, please save it as pdf, since I can't read .wpd documents. And I sometimes have problems with Pages, so also save this format as pdf.)

Answer ALL of the following questions.

1. Using either signed or unsigned modal tableaux to determine the validity or otherwise of the following problems in the modal systems indicated. If they are not valid, give a counter model (statement of what worlds there are, what accessibility relations hold, and what the values of the atomic propositions in each world are).
a. $\diamond \square p \vDash \square \diamond p$ in system $\mathrm{S}_{4}$ (which Priest calls $\mathrm{K} \rho \tau$ )
b. $\vDash \diamond \square \square(p \wedge \neg p) \wedge(q \rightarrow q)$ in system $\mathrm{S}_{2}$ (which Priest calls $\mathrm{N} \rho$ )
2. Priest's system $\mathrm{C}^{+}$captures most of his views of conditionals, particularly his thoughts about how conditionals have ceteris paribus clauses attached to them. Translate this English argument into notation suitable for his conditional logic (treat all 'if-then' as ceteris paribus conditionals), and construct $\mathrm{C}^{+}$tableaux for it. Use $\mathrm{S}_{5}$ accessibility $(\mathrm{K} v)$ for the regular modal operators $\square$ and $\diamond$. If the argument is invalid, describe a counter model for it.
a. It is possible that Mickey and Nancy are both mice. If Mickey is a mouse then it has fur. If Nancy is a mouse then it has fur. Therefore, if Mickey and Nancy are mice, then they both have fur.
3. Is it really plausible that the laws of logic - which all the parties agree hold in every possible world - might be false, as $\mathrm{S}_{2}$ and $\mathrm{S}_{3}$ claim? What considerations might be adduced for each side. (Go ahead! Even if you strongly favour one side of this dispute, try to think of something - anything - that might be advanced by the other side!)
