

Phil 2310
Spring 2014

Assignment 5

This homework is due by the beginning of class on Fri, March 7th. **This is a corrected version of the homework which has been posted the morning of Wednesday, March 5**

Chap 8: The Logic of Conditionals

Read pp. 198-213. We will not discuss section 8.3 (read it if you wish – it is interesting and it may help.)

Do 8.17, 8.18, 8.20, 8.21, 8.25

In addition to the above, show that each of the following arguments is valid by constructing a proof in \mathcal{F} . You should write out each proof on a piece of paper and hand it in to your TA in class. You could also write your proof in Fitch and then simply print it out. If you do that, you must click ‘show step numbers’ and also ‘verify proof’ before you print it.

Note that for each argument, the premises are separated by commas on the left and the conclusion is what follows the ‘Therefore’.

1. $P \rightarrow (Q \rightarrow R), \neg R$ Therefore $Q \rightarrow \neg P$
2. $((P \wedge Q) \wedge R) \rightarrow S$ Therefore $R \rightarrow (P \rightarrow (Q \rightarrow S))$
3. $(P \rightarrow Q) \rightarrow S, Q \leftrightarrow R$ Therefore $(P \rightarrow R) \rightarrow S$
4. $\neg P \leftrightarrow Q$ Therefore $P \leftrightarrow \neg Q$
5. $(P \leftrightarrow Q) \vee (S \leftrightarrow T)$ Therefore $(P \rightarrow Q) \vee (S \rightarrow T)$