

Phil 2310  
Fall 2010

Assignment 4: This homework is due by the beginning of class on Mon, Sept 27th.

Chap 8: The Logic of Conditionals

Read pp. 198-213. We will discuss section 8.3 next week (you can certainly read it now if you wish – it may help).

Do 8.17, 8.18, 8.21, 8.24, 8.25, 8.27, 8.32

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 me 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.

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