

Phil 57 section 3
Fall 2010

Homework: Rules of Replacement

Using the rules of replacement and the rules of inference, prove the following:

1. $R, \sim(\sim P \vee \sim Q) \vee S, \sim(Q \bullet R) / S$
2. $((P \bullet Q) \vee R), \sim(P \vee \sim R) / Q$
3. $(\sim R \vee S), ((P \vee Q) \rightarrow (R \bullet \sim S)) / \sim P$
4. $(P \bullet (Q \rightarrow R)), \sim(R \bullet P) / \sim Q$
5. $(H \rightarrow K), (C \leftrightarrow D), (\sim C \rightarrow \sim K) / (H \rightarrow D)$
6. $(\sim P \rightarrow (Q \bullet R)), \sim R / P$
7. $(\sim R \vee \sim S), (P \rightarrow (R \bullet S)) / \sim P$
8. $\sim P, ((P \vee Q) \leftrightarrow R), \sim Q / \sim(R \bullet S)$
9. $(P \vee (Q \bullet R)), \sim R / P$