

Phil 57 section 3
Fall 2010

Truth-Tree Homework

Using the truth-tree method, determine whether the following arguments are valid.

1. Premises: $(P \rightarrow Q), \sim Q$ Conclusion: P
2. Premises: $(P \rightarrow Q), (R \rightarrow S), (\sim S \vee \sim Q)$ Conclusion: $(\sim R \vee \sim P)$
3. Premises: $(P \vee (Q \vee R)), (\sim Q \bullet \sim R)$ Conclusion: P
4. Premises: $(P \rightarrow (Q \rightarrow R)), P, \sim R$ Conclusion: $\sim Q$
5. Premises: $(P \bullet Q)$ Conclusion: $(Q \vee R)$
6. Premises: $\sim(P \rightarrow Q)$ Conclusion: $(\sim Q \vee R)$
7. Premises: $(P \vee \sim Q), (\sim P \vee R)$ Conclusion: $(\sim R \rightarrow \sim P)$
8. Premises: $(P \rightarrow Q), (Q \rightarrow P)$ Conclusion: $(P \leftrightarrow Q)$
9. Premises: $(P \bullet Q), (Q \bullet \sim R)$ Conclusion: $(R \rightarrow \sim P)$
10. Premises: $(P \rightarrow Q), (Q \rightarrow R), (\sim S \vee V)$ Conclusion: $(P \bullet V),$