

Assignment Week 3

Philosophy 305

Due January 21, 2022, 5pm

Truth Tables and Validity

Using <http://carnap.io>, use truth tables to check whether the following arguments are valid.

1. $P \wedge (Q \vee R) \models (P \wedge Q) \vee (P \wedge R)$
2. $P \wedge (Q \vee R) \models (P \vee Q) \wedge (P \vee R)$
3. $(P \wedge Q) \vee (P \wedge R) \models P \wedge (Q \vee R)$
4. $(P \vee Q) \wedge (P \vee R) \models P \wedge (Q \vee R)$
5. $P \vee (Q \wedge R) \models (P \vee Q) \wedge (P \vee R)$
6. $P \vee (Q \wedge R) \models (P \wedge Q) \vee (P \wedge R)$
7. $(P \vee Q) \wedge (P \vee R) \models P \vee (Q \wedge R)$
8. $(P \wedge Q) \wedge (P \wedge R) \models P \vee (Q \wedge R)$
9. $\models ((P \rightarrow Q) \rightarrow P) \rightarrow P$
10. $\models (P \rightarrow Q) \vee (Q \rightarrow P)$