

# Assignment Week 3

Philosophy 305

Due February 5, 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.  $\models (P \rightarrow Q) \vee (Q \rightarrow P)$