

Exercises to 4.2 *Three-valued logic*

(1) *For each formula, construct two truth tables – one for Kleene’s three-valued logic and one for Bochvar’s. Actually, construct a single table but write two values in the cells where the two tables differ.*

1) $p \rightarrow \neg p$

2) $(p \rightarrow \neg q) \wedge p$

3) $\neg p \vee (q \wedge \neg q)$

4) $(p \wedge q) \rightarrow (\neg p \vee \neg q)$

5) $(p \vee q) \leftrightarrow (\neg p \rightarrow q)$

6) $p \rightarrow (q \rightarrow (\neg q \rightarrow p))$