

Worksheet 13.2: Truth Tables for Negation, Conjunction, and Disjunction

Construct a truth table for each statement below.

1. $p \wedge \sim p$

2. $q \vee \sim p$

3. $p \wedge \sim q$

4. $\sim p \vee \sim q$

5. $\sim(p \wedge \sim q)$

6. $\sim(p \vee \sim q)$

7. $(p \wedge r) \vee \sim q$

8. $(p \vee \sim q) \wedge r$

9. $\sim q \wedge (r \vee \sim p)$

10. $\sim r \vee (\sim p \wedge q)$

If p is true, q is false, and r is true, determine the truth value of each statement below.

11. $\sim p \vee (q \wedge r)$

12. $(\sim p \vee \sim q) \vee \sim r$