

Construct a truth table for each of the following.

1. $\sim p \vee \sim q$

2. $P \vee (\sim Q \wedge R)$

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

4. $(P \wedge Q) \vee (R \wedge S)$

Use a truth table to determine if each set of conditions are logically equivalent.

5. $P \vee Q$ and $\sim(\sim P \wedge \sim Q)$

6. $p \wedge (r \wedge q)$ and $\sim p \vee (\sim r \vee \sim q)$