COMP 410
Fall 2025

Solving SAT Instances with Semantic Tableau

Write out the entire semantic tableau for each one of the following Boolean formulas. Using this tableau, determine if the formula is satisfiable or unsatisfiable. If the formula is satisfiable, provide a satisfying assignment.

1.)

$\neg x$

2.)

$x \land \neg y \land \neg z$

3.)

$(x \land \neg x) \lor x$

4.)

$(x \lor y) \land (\neg x \lor \neg y)$