

17-355/17-655/17-819: Program Analysis

Lecture 16, Satisfiability Modulo Theories

In-Class Exercises

March 19, 2018

Andrew ID: _____

1. Apply DPLL to the following formula, describing each step (unit propagation, pure literal elimination, choosing a literal, or backtracking) and showing how it affects the formula until you prove that the formula is satisfiable or not:

$$(a \vee b) \wedge (a \vee c) \wedge (\neg a \vee c) \wedge (a \vee \neg c) \wedge (\neg a \vee \neg c) \wedge (\neg d)$$