

Exercises for “Decision Procedures for Verification”
Exercise sheet 8.2

Exercise 8.1: (6 P)

Check the satisfiability of the following ground formulae using the algorithm based on congruence closure presented in the lecture.

$$(1) \phi_1 = f(f(c)) \approx f(c) \wedge f(f(c)) \approx f(d) \wedge d \not\approx f(c).$$

$$(2) \phi_2 = f(f(c)) \approx f(c) \wedge f(c) \approx d \wedge f(d) \not\approx f(f(c)).$$

Please submit your solution until Wednesday, January 15, 2014 at 13:00. Joint solutions prepared by up to three persons are allowed. Please do not forget to write your name on your solution.

Submission possibilities:

- By e-mail to sofronie@uni-koblenz.de with the keyword “Homework DP” in the subject.
- Put it in the box in front of Room B 222.