

Model Checking, SS2011: Outline of class 7

May 23, 2011

1. Relational composition (see exercise 6.1).
2. Properties of relational composition, $post$, and α (see exercises 6.2 and 6.3).
3. Example: abstraction refinement by interpolation (see exercise 6.4).
 - (a) Problem statement: find I and J satisfying
$$post(\rho_1, pc = l_1) \models I \wedge post(\rho_3, I) \models J \wedge post(\rho_5, J) \models \perp$$
 - (b) Elimination of J by relational composition of ρ_3 and ρ_5 .
 - (c) Using interpolation to find I .
 - (d) Using interpolation to find J .
4. Abstract Reachability with Predicate Refinement algorithm.
 - (a) Make Path algorithm.
5. Example: reduction of interpolantion to linear programming.