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February 7, 2024

Tutorials for “Automated Reasoning”
Exercise sheet 13

Exercise 13.1:

Let R be the set of rewrite rules

$$f(g(x)) \rightarrow g(x) \quad (1)$$

$$f(f(x)) \rightarrow f(h(g(x))) \quad (2)$$

$$g(g(x)) \rightarrow g(h(f(x))) \quad (3)$$

- (1) Determine $DP(R)$.
- (2) Construct the approximated dependency graph for R using cap and ren.
- (3) Show that R is terminating using a reduction pair that is based on a suitable polynomial interpretation.

Bring your solution to the tutorial on February 9 and compare it with the solution that is discussed there. If you are still unsure afterwards whether your solution is correct or not, feel free to ask the instructor after the tutorial. Your solution will not be graded.