Tutorials for “Decision Procedures SS19”
Exercise sheet 1

Exercise 1.1:
Apply Nelson-Oppen to the LRA, EUF combination and the formula

\[ f(x_1,0) \geq x_3 \land f(x_2,0) \leq x_3 \land x_1 \approx x_2 \land x_3 - f(x_1,0) \geq 1 \]

where I assume appropriate sorts for the variables and function declarations.

Exercise 1.2:
Apply Nelson-Oppen to the LRA, EUF combination and the formula

\[ x_2 \geq x_1 \land x_1 - x_3 \geq x_2 \land g(f(x_1) - f(x_2)) \not\approx g(x_3) \land x_3 \geq 0 \]

where I assume appropriate sorts for the variables and function declarations.