

Exercises for Computability and Complexity, Spring 2018, Sheet 5

Please return on Thursday, March 15, in class. As usual you are invited but not requested to work in teams of size at most 2.

Exercise 1 This problem concerns, and uses the notation from, Section 6.4 from the lecture notes (undecidability of FOL). Show that the language

$$L_{\rightarrow} = \{ \langle \xi \rightarrow \zeta \rangle \in \{0,1,\#\}^* \mid \xi, \zeta \text{ are } S\text{-expressions, and } \xi \models \zeta \}$$

is undecidable.