

Exercises for Computability and Complexity, Spring 2017, Sheet 5

Please return on Thursday, March 16, in class.

*This problem sheet features only a single problem, which is **optional**. It is the infamous problem that I placed on the B group miniquiz 1 sheets. The problem hard, but it can be solved with the ideas that were presented in this course so far. I am curious whether somebody will go for it. I will award bonus points for insightful treatments (need not necessarily be complete proofs).*

Problem 1 (optional) Prove the following claim: If L is recursively enumerable but not recursive, then there exists another language L' which is likewise r.e. but not recursive, such that $L \cup L'$ is recursive.