

Homework 4a

1. (a) Is the class of languages $\{\mathbb{N} - \{x\} \mid x \in \mathbb{N}\}$ identifiable in the limit from text? If yes, produce an algorithm that identifies the class in the limit. If no, give an argument of why no such algorithm exists.
(b) How can we make the class unidentifiable in the limit? (e.g., by adding one language)
2. Is the class of languages $\text{COFIN}(\mathbb{N})$, consisting of all the cofinite sets of \mathbb{N} , identifiable in the limit? If yes, produce an algorithm that identifies the class in the limit. If no, give an argument of why no such algorithm exists.
3. Give an example of a class of languages that is not superfinite, in the sense that it does not contain all finite languages, but still contains an infinite language, and which is identifiable in the limit from text.