

Algorithmic Automata Theory

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Exercise Sheet 3

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Out: Apr 18

Due: Apr 24, 12:00

Exercise 1: Ehrenfeucht-Fraïssé Games

Let $n \in \mathbb{N}$ be arbitrary. Which is the maximal number of rounds $k \in \mathbb{N}$ such that the duplicator has a winning strategy for $G_k((ab)^{2n+1}, (ba)^{2n+1})$?

Hint: First see what happens for $n = 1$ and $n = 2$.

Exercise 2: More Ehrenfeucht-Fraïssé Games

Let $n \in \mathbb{N}$ be arbitrary. For which k does the Duplicator win $G_k(a^n b a^n, a^n b a^{n+1})$?