

EXERCISES TO PREPARE FOR MON 2025-02-03

Exercise 1. Design an algorithm that takes as input a polynomial $P(x) \in \mathbb{K}[x]$ of degree $< d$ and a point $a \in \mathbb{K}$ computes the Taylor shift $P(x+a)$ in $O(M(d) \log d)$ ops.

Exercise 2. Give an algorithm to convert an n -bit integer A from base 2 to base 10 in $O(M_{\mathbb{Z}}(n) \log n)$ bit operations, where $M_{\mathbb{Z}}(n)$ is a bound on the cost of n -bit integer multiplication.