

Norbert Blum

Complexity of Boolean functions

SS 2019 Homework 2

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Exercise 1:

We have shown that $C_{\Omega_0}(f_{decode}^{(t)}) \leq 2^t + (2t - 2)2^{\frac{t}{2}}$. What is the best upper bound which you can obtain?

Exercise 2:

- a) Complete Case $n = 3$ in the proof of Theorem 2.2 of the lecture.
- b) Prove Lemma 2.1 of the lecture.

Exercise 3:

Give some examples of symmetric functions.