

MITRO207-2018
Homework 5

Problem 1: n -skeleton (Exercise 5.1)

Show that the colorless complex corresponding to independently assigning values from a set V^{in} to a set of $n+1$ processes is the n -skeleton of $\mathbf{s}^{|V^{in}|-1}$ (the complex of all the faces of the standard $(|V^{in}|-1)$ -dimensional simplex).

Problem 2: solving set agreement with test-and-set

Recall the test-and-set objects from Problem 1 of Homework 4. Assuming that the input complex \mathcal{I} is \mathbf{s}^n , give an $(n+1)$ -process protocol for solving $\lceil \frac{n+1}{2} \rceil$ -set agreement using *test-and-set* objects.