

Algorithmic Game Theory

Summer Term 2026

Tutorial Session - Week 6

Exercise 1:

Recall the auction of k identical items from the previous exercise set: Each bidder can acquire at most one of the items. If bidder i gets one of the items, she has a value of v_i . Otherwise, that is, if she does not get an item, she has a value of 0.

Make use of the VCG-results from the lecture in order to design a truthful mechanism for this auction. For this purpose, explicitly state the function f and calculate the payment rule p .