

Algorithmic Game Theory

Winter Term 2020/21

Tutorial Session - Week 9

Exercise 1:

Consider three unit-demand buyers and two items a, b with

$$v_{1,a} = 5, v_{1,b} = 3, v_{2,a} = 3, v_{2,b} = 4, v_{3,a} = 2, v_{3,b} = 2 .$$

Determine the Walrasian price vector which is determined by the VCG mechanism.

Exercise 2:

Have a look at the single-minded combinatorial auction with three bidders (red, blue, green) and items a, b, c which is depicted below. State all values of $x \in \mathbb{R}_{\geq 0}$ such that there exists a Walrasian equilibrium and prove your claim.

