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Algorithmic Game Theory

Winter Term 2021/22

Tutorial Session - Week 5

Exercise 1:
State for each $M \geq 1$ a network congestion game with two players such that the Price of Anarchy of pure Nash equilibria is at least M.

Exercise 2:
A *fair cost-sharing game* is a congestion game such that for all resources $r \in \mathcal{R}$ the delay function can be modeled as $d_r(x) = c_r/x$ for a constant c_r. Show that fair cost sharing games with n players are $(n, 0)$-smooth.