

Note: There is only one exercise sheet for the 3rd tutorial.

1. Solve exercise 21.B.2 in Mas-Colell, Whinston and Green [MWG].
2. Solve exercise 21.B.3 in MWG.
3. Solve exercise 21.C.2 in MWG.
4. Solve exercise 21.D.5 in MWG.
5. Solve exercise 21.D.10 in MWG.

Note that in the fourth line of part (c) it should be “Show that preferences over X ”.

6. Suppose there is an odd number of individuals and a set of alternatives X . Denote by \mathcal{P}_{\geq}^I the set of strict rational preference profiles that are single-peaked with respect to some linear order \geq . Let $f : \mathcal{P}_{\geq}^I \rightarrow X$ be the social choice function that, for any profile of reported preferences, chooses the peak alternative of the median agent.

Show that the “no-incentive-to-misreport” condition (MWG, p. 811) holds, i.e. that it is a dominant strategy for the agents to report their preferences truthfully.