

Exercises for seminar We. 29. Mar. 08:15–10:00 (HH Seminarrom 101)

1. Which axioms (of those seen in class) does the maximax SWO (hereafter defined) satisfy?
A SWO R^* is maximax if for each pair $u, v \in \mathbb{R}^n$, uR^*v iff $\max [u_i] \geq \max[v_i]$.
2. Define the maximax SWFL.
3. Use the axioms of (our characterization of) utilitarianism to show, step by step, that the utility vector $=4 \ 5 \ -3$ is socially more desirable than the utility vector $=-1 \ 1 \ 4$. [Hint: use the axioms to go from comparing u and v to comparing other vectors u' and v' , and so on, until you can show that the required relation holds]
4. Using counterexamples, show that this ranking between u and v requires at least cardinal scale and unit comparable information about utilities. [Hint, assume a more general invariance axiom holds and, by means of example, get to a contradiction]