

Behavioral Economics

Mark Dean

Homework 6

Due Tuesday April 11th

Question 1 Let X be a finite set of prizes and $\Delta(X)$ be the set of lotteries over those prizes. Show that, if a set of preferences \succeq on $\Delta(X)$ has an expected utility representation, then it must be the case that it satisfies the independence and Archimedean axioms

Question 2 Show that, if $u : X \rightarrow \mathbb{R}$ is a von-Neuman Morgensten utility function that represents \succeq , then $v : X \rightarrow \mathbb{R}$ also represents \succeq if and only if $v(x) = au(x) + b$ for all $x \in X$ and some $a > 0, b \in \mathbb{R}$

Question 3 Over the coming weeks, I want you to prepare a 1 page research proposal for your project. As practice for this, I want you to prepare a 1-2 page research proposal of someone else's work. In your groups, I want you to pick a paper related to the course (and, ideally, to the research project that you want to do), and imagine that this research has NOT been done, but you want to persuade someone that it SHOULD be done - i.e. write a research proposal for the project. This proposal should include the following information

1. What SPECIFICALLY is the question that you would like to answer
2. Why this is interesting
3. What you are going to do in order to answer this question (the experiment that you would run or the theory that you would do)
4. How doing this will answer the question

If you are struggling to find a paper, you can email me or the TAs for suggestions. As well as submitting your paper as part of the homework, I will be picking on random individuals in

class to give a 5 minute talk through their research proposals on Tuesday April 11th and Thursday April 13th. The individual, who I will select in class, will have to talk (i.e. they cannot defer to another member of the group) so be prepared.