

Essay Questions for Final Exam

Two of the following six questions will be randomly selected for the final exam. You should allocate about thirty minutes of exam time to answering each question. Your grade on these answers will depend on the coherence and completeness of the answer and on your demonstrating knowledge of the material covered in this course. This part of the exam is not open-book or open-notes.

- 1) Discuss randomness: In what sense is it good for researchers, in what sense is it bad for researchers, how might a researcher collect data in a fashion that exploits the good aspect of randomness, and how can a researcher deal with data that are collected in a nonrandom fashion?
- 2) At various points in the course, examples have been given of how ordinary humans (i.e., people who haven't had Econ 300) might make systematic errors in interpreting statistical evidence. Discuss some of these examples. What conclusion do you, as a scientific researcher, draw from these examples?
- 3) Suppose you are doing a study of whether or not eating healthy food (i.e., fruits, vegetables, and high-fiber low-fat foods in general) affects life expectancy. You are being funded by the American Junk Food Association, which is hoping that your study will show that eating healthy food has no relationship to life expectancy (or, even better, reduces life expectancy). Discuss various ways in which you might be able to conduct the study or present your statistical results so as to support the conclusion that your sponsor prefers.
- 4) Suppose Prof. Vroom announces that she has found, in a study funded by the federal government, that states with higher highway speed limits have lower accident rates. She concludes from her findings that in order to lower the accident rates still further, there should be no speed limit at all on highways. You are an employee of the funding agency and are assigned to interrogate her in order to determine the reliability of her conclusion. Develop an orderly set of questions that you would ask her (i.e., don't just ask questions in random order, but have some plan or progression for asking the questions).
- 5) Discuss how you think an economist should estimate a demand curve for a given product. You can pick a specific product and discuss the problem in the specific context, or discuss estimating demand curves in general.
- 6) Suppose an economist is trying to predict what unemployment will be in August 2010. Discuss how you think an economist should go about making this prediction.