Checkpoint 8

Reading Assignment

Read the appropriately noted sections of the Handbook chapter by Gerber and Green. It's a good chapter, so you are certainly encouraged to read all of it, but this assignment only requires the sections on the syllabus.

Question 1

i) Define, both from the chapter and in your own words the following:

a) *Exclusion Restriction*

b) *SUTVA*

c) *Monotonicity*

ii) Explain for each term above why they matter when running an experiment. A complete answer is not simply pulled from the chapter, but is rather how you would describe these to a friend in class during a study session.

Question 2

Explain why it is sometimes impossible to determine which units are compliers in an experiment. Relate this in your own words to a study discussed in the chapter.

Question 3

Define attrition in your own words. What are situations in which attrition is an issue for experiments?

Question 4

Based on the reading, consider the following dataset. Here R_i is an indicator whether the outcome Y_i was observed by an experimenter.

Unit	Y_i^*	R_i
1	1	1
2	NA	0
3	1	1
4	0	1
5	1	1
6	NA	0

Estimate the appropriate interval for which the expected value of Y lies within. Provide your answer in interval notation.

Question 5

What is the common name for the bounds that you defined in Q4? Do you think these bounds are useful? Why or why not?