

Instructions: Answer each question completely. Show all work for any computational questions.

1. Describe two kinds of nonsampling error.

measurement errors
processing errors
response errors

Answers will vary

2. Why might survey results be stratified? Give at least one reason.

we may want to compare differences between groups
for instance to compare men vs. women, or
Democrats vs. Republicans.

3. Why is the wording of questions so important in a poll?

confusing or misleading questions can lead to unreliable
or contradictory data

4. To study the effect of neighborhoods on academic performance, 1000 families were given housing vouchers to move out of their low-income neighborhoods. No improvement in test scores was found. What is a possible lurking variable that might explain these results even when neighborhoods do affect academic performance?

past educational performance might take longer to
overcome; maybe moving out of neighborhood did not
change the school students attended

5. Researchers want to compare a new heart medication to one that's already on the market. They want to determine its effectiveness generally, and in relation to the current medication, so they separate their 3600 heart patients into three groups using simple random sampling methods and give one group the new medication, one group the old medication, and one group a placebo. All the groups are asked to monitor their diet and exercise. Draw a diagram of the experiment and label each piece appropriately, including the response variable to be measured.

