

This worksheet asks questions regarding the survey each of you just completed. Although you were told that the number selected for X in the survey was chosen at random from the integers between 0 and 100, only two numbers were actually used: 10 & 65. Will the students who were prompted with the 10 tend to have a lower guess than the students who were prompted with a 65?

1. Is this an observational study or a controlled experiment? Explain.

2. Was blindness used in this study, and if so, how?

3. Explain in a sentence or two how randomization was used in this study.

4. The response variable in this study was the estimate of the percentage of countries, among all those in the United Nations, that are in Africa. Draw a diagram of this study in the space below.

5. Your instructor should have written these estimates for the two groups on the board. Construct back-to-back stemplots of the two distributions on the stems shown to the right. For which group (65 prompt or 10 prompt) do the estimated percentages tend to be higher?

0
0
1
1
2
2
3
3
4
4
5
5
6
6
7
7

6. Compute the sample mean percentages for each group. Do you think there is a significant difference between the mean percentages for the two groups? What other information might you need to calculate to answer this question?

7. If the observed difference is statistically significant, what does this say about whether a person's estimate is independent of what value they were prompted with?