STAT 221  Introduction to Probability and Statistics  Winter 2012

Quiz 10

Taken on Fri Jan 27. You may work with a group of as many students as you’d like, submitting one quiz with all names, provided that you all contribute to the work. You may use your notes.

First recall the Sudoku example from handout 10.

1. What additional information did we need in order to determine a confidence interval?

Now recall the “cat households” example from handout 10.

2. We concluded that the sample data provided very strong evidence that the proportion of American households that own a pet cat is not one-third. Did we use the p-value or confidence interval to conclude this?

3. We concluded that the sample data revealed that the proportion of American households that own a pet cat is not very different from one-third. Did we use the p-value or confidence interval to conclude this?

Finally, recall the “female Senators” example from handout 10.

4. Why did the alien’s confidence interval do such a terrible job of estimating the proportion of human beings who are female?

5. Verify that the technical conditions for a z-interval (i.e. for the normal approximation) are satisfied with these data.