**BIO 206: Biostatistics Spring 2021**

Assignment 5: Questions from Chapter 4 “Estimating with Uncertainty”

(53 pts)

**Due Wed., April 14**

* Please type put your name and the number or title of the assignment on the first page.
* Make sure to answer every question within a problem.
* For practice problems, please write an answer in your own words before checking your answer against the solutions in the back of the book. Then, compare the solution to your answer. If your answer wasn't correct, don't change it--write about how the solution in the book differed from your answer and why it's correct. In other words, show evidence that you are thinking independently and learning. In this way, you can get full credit even if you originally didn't have the correct answer.
* Assignments turned in after the beginning of class are late, unless a person has an excused absence.

Chapter 4--Practice Problems

1 all (9 pt) Create a table and do each step in successive columns in the same way that we did the class activity with dice that was about calculating standard errors and confidence intervals.

8 (2 pt)

11 (1 pt each, 4 pt total) Hint: before you answer, remember the class activity in which we estimated the sampling distribution of the mean for different “experiments” (sets of rolls of dice). In every experiment, we were trying to estimate was the true mean was.

12 (2 pt)

14 (2 pt)

Chapter 4--Assignment Problems

15a (4 pt) show your work

15b (2 pt)

15c (2 pt)

15d (2 pt) Hint: consider how the data were collected.

18 Show your work. Create a table and do each step in successive columns using Excel for the calculations. Don’t use functions such as stdev—do the calculations as steps as in the textbook or the class activity on dice. Show each step. Copy and paste the table into your assignment.

18a, b, and c: (4 pt each; 12 pt total) After the table showing the steps in Excel, type the final answers here.

18 d, e, and f: (2 pt each; 6 pt total)

22 a, b, and c (2 pt each; 6 pt total). For a, the first part of the question is asking you just to look at the numbers, not to do a statistical test.

====

Extra question: At the end of your paper, please write “Number of hours I spent on this homework:” and add an estimate. Don’t include time that you spent reading the chapter. This number won’t affect your grade.