

Homework 3

Math 445, Spring 2017

Due Wednesday, April 26 by 4:30 p.m.

Instructions

- Please complete problems that require the use of R in R markdown. Theoretical problems may be handwritten. **Please knit your .Rmd file to either Word or PDF and print it for submission** with the remainder of the problems.
- All assignments should be stapled.
- Remember that the textbook data sets are contained in the `resampled` R package.
- When completing a hypothesis test, be sure to outline all of the steps in your solution.

Assignment

Complete the following exercises from **Chapter 5** of the textbook.

“For all exercises that ask you to perform exploratory data analysis (EDA), you should plot the data, describe the shape of the distribution (bell-shaped, symmetric, skewed, etc.), and provide summary statistics (mean, standard deviation). For bootstrapping questions, always provide plots and describe the shape, spread, and bias of the distribution.” (Chihara and Hesterberg, 2011)

Exercise 8

Correction: Part (a) should read:

“Use simulation (with $n = 200$) to generate an approximate sampling distribution of the mean; plot and describe the distribution.”

Exercise 9

Exercise 10

Exercise 11

Exercise 12

Exercise 17