

## STOR 151, Spring 2024, Homework 2

Reading: course text up to and including section 2.1.3

Problems for solution:

1. Exercise 1.34, page 35 of course text
2. Exercise 1.42, page 38 of course text
3. Exercise 2.2, page 56 of course text
4. This problem is based on the dataset “salinity”. Download directly from the [openintro.org](https://www.openintro.org) webpage or using the links <https://www.openintro.org/data/tab-delimited/salinity.txt> (text file) or <https://www.openintro.org/data/csv/salinity.csv> (csv file). The dataset shows salinity measurements at three water masses in the Bahamas, labelled I, II and III. Questions:
  - a. Draw three dotplots, one on top of the other, showing the distributions of salinity within each of the three water masses. Briefly describe the results, e.g. would you say there are a substantial differences between the three water masses?
  - b. Combining all three water masses together, draw a histogram that shows the full set of salinity measurements. You may choose whether to do this by hand or to use Excel or similar software (but “by hand” is recommended, unless you are already familiar with the software). Whether your histogram is hand-generated or computer-generated, make sure you clearly label the axes and show the units of the items being plotted. Briefly describe the histogram; e.g. is the distribution left skewed, right skewed, or symmetric? Is it unimodal, bimodal, multimodal?
  - c. Compute the means of the three subsamples labelled I, II and III and briefly state whether they strengthen or weaken your earlier conclusions about differences among the three water masses.

Lengthy answers are not required, but you should be sure to address each part of the question in your answer.

Hand in on gradescope. If uploading as a single pdf file, please “assign” your pages.

Due time and date: 11:59 pm Thursday, January 25, 2024