MATH 252-01: Probability and Statistics II

Problem Set 1

Assigned 2019 January 15
Due 2019 January 22

Show your work on all problems! If you use a computer to assist with numerical computations, turn in your source code as well.

1 Devore Chapter 6, Problem 10

2 Devore Chapter 6, Problem 22

3 Devore Chapter 6, Problem 32

4 Computational Exercise

This is designed to give you some practice in dealing with larger data sets using a numerical computation environment such as minitab. Download the data for this problem from
`http://ccrg.rit.edu/~whelan/courses/2019_1sp_MATH_252/data/ps01_prob4.dat`
using the username and password given in class.

- **a.** Read the data into your software program.
- **b.** Determine the sample size n.
- **c.** Locate the option to calculate the sample median $\widetilde{x}$ of the data and evaluate it.
- **d.** Locate the option to calculate the sample mean $\overline{x}$ of the data and evaluate it.
- **e.** Locate the option to calculate the sample variance s^2 of the data and evaluate it.
- **f.** Verify that your software package has calculated the variance as

$$s^2 = \frac{1}{n-1}\sum(x_i - \overline{x})^2$$

  (with $n - 1$ in the denominator and not n). If not, perform the necessary adjustment.