Assignment 3

Paul Gribble
Winter, 2019

due: Feb 7, 2019

One-Way ANOVA

You are still Dean of Science at Western (congratulations!). One of the new Assistant Professors in the Department of Mathematics is still asking for a salary raise. He's given you more data to make his case, this time data from a third section of Calculus. So now there are data from n=50 students in three sections of Calculus (I, II, III). The Professor in question teaches Section I.

You can download the full dataset here:
https://www.gribblelab.org/stats2019/data/calculus2.csv

1. Articulate a null hypothesis in plain language. (1 point)
2. Generate some sort of plot showing average grades across the three calculus sections, and the mean grade, plus or minus one standard error of the mean. (1 point)
3. Perform a one-way ANOVA on the three sections of Calculus grades (2.0 points)
4. What assumptions do you have to make when performing your analysis? If possible/necessary, test those assumptions. (2.0 points)
5. What will you conclude? (1.0 points)