

431 Homework 3 Grading Rubric

Thomas E. Love and 431 Staff

Assignment was due at noon 2018-09-21

General/Administrative (20 points)

- Award up to 10 points for turning the assignment on time (on time = within 1 hour of the deadline, which was noon 2017-09-21)
 - 10 points for both Markdown and Word/HTML/PDF in on time.
 - 6 points for one of Markdown, Word/HTML/PDF in on time.
 - 0 points if neither is in on time.
 - If a student hasn't submitted either the Markdown or Word/HTML/PDF piece, please identify and pester them via email until they do.
- Award an additional 10 points if there is an on-time answer provided for each of the 7 questions.
- Award zero points on the entire assignment to anyone whose first submission of the assignment is more than 24 hours late, although be sure to contact Dr. Love to see if he has heard from the student first.

Question 1 (5 points)

5 points for a correct answer with code to indicate how they got it. 2 points for a correct answer but no indication of using code to determine. Otherwise, 0.

Question 2 (5 points)

5 points for a correct answer (name of each country and correct identification as “least developed” or not is required for a correct answer.) 3 points if they got 2/3 correct, or if they named all three countries but did not identify as least developed or not Otherwise, 0.

Question 3 (10 points)

Give 10 points if they do all five of the following:

- successfully built the histogram, as required,
- with the Normal distribution plotted as well,
- and labeled it correctly,
- and correctly interpreted it using complete sentences,
- and correctly answered the question about SD or IQR

Drop 2 points for each of those five things that they didn't succeed in doing.

Question 4 (10 points)

Give 10 points if they do all five of the following:

- successfully built a Normal Q-Q plot using `ggplot2`
- include in the plot an appropriate diagonal line,
- correctly interpreted it in terms of Normal vs. Non-Normal using complete sentences
- correctly described what kind of non-Normality they saw (curve = skew)
- provided meaningful justification for their read of the plot with either another plot (like a histogram or boxplot) and a meaningful explanation in complete sentences, **or** with numerical summaries (like those I described in the sketch) and a meaningful explanation in complete sentences.

Drop 2 points for each of those five things that they didn't succeed in doing.

Question 5 (10 points)

- 10 points for producing a useful plot, likely a boxplot or a reasonable and correct comparison of two histograms, that does actually report the data appropriately, and for building English sentences that conclude that the “least developed” nations had generally higher rates of low birthweight.
- 6 points for producing a useful plot, but not concluding that the “least developed” nations had generally higher rates of low birthweight.
- 0 points for a useless or incorrect plot.

Question 6 (30 points)

You need to identify (as a group) the 5-7 best essays (of the complete set of 50+) that were read by the TAs (so that's choosing from the best two that each of you read, probably) in the Comments section. In the Comments, please briefly identify the top 5-7 and specify the topic of these 5-7 best essays so I can read through them before returning them to the students.

- Award up to 10 points for proper grammar, use of citations, and appropriate length.
 - Take off 5 points if the grammar is consistently poor.
 - Take off 2 points if no citations are used
 - Take off 3 points if the essay does not meet the required length of 200-400 words.
- Award up to 10 points for describing an “example in your own field/work/experience where a *surplus* of information made (or makes) it easier for people dealing with a complex system to cherry-pick information that supports their prior positions.”
 - A run of the mill “good” example should receive 7-9 points on this. Reserve 10 points on this for an absolutely excellent essay that was a real pleasure to read.
 - Award no more than 5 points if there is no specific example given.
 - Take off all 10 points if the essay prompt was not followed at all, or the essay is completely off topic.
- Award up to 10 points for describing the implications/lessons learned from the given example.
 - A run of the mill “good” description should receive 7-9 points on this. Reserve 10 points for an absolutely excellent essay.
 - Take off 5 points if no lessons/implications are provided.
 - Take off all 10 points if the essay prompt was not followed at all, or the essay is completely off topic.

The best few essays overall might receive a grade between 28 and 30, but I expect most essays to score between 20 and 26 points. No need to break down the three parts in the roster - just provide the total score on the essay. But I would like you to provide a comment for every essay that doesn't score between 24 and 26 points (which we'll assume indicates a reasonably good essay).

Question 7 (15 points)

1. Award 5 points for making the random samples and the four QQ plots.
 - 3 points for just random samples, but no QQ plots or vice versa.
 - 2 points if only the first random sample and QQ plot are completed.
2. Award 10 additional points for answering both questions fully, noting that the plots show modest deviations from what is expected from a Normal distribution due to outliers, and for noting that all the plots with 25 points or more approximate a straight line fairly well.
 - Deduct 5 points for not getting the point that they are all about equally good, unless their choice of random number was very unfortunate (in which case they should notice whatever they saw in their simulation.)
 - Deduct 5 points for only answering one of the two questions posed.
 - Deduct 3 points (but don't take this question below 0 points) if they neglected to set a seed for the random numbers.

Elements for the Class Roster

The maximum score on the assignment is 105 points, but we'll treat that as if it's out of 100.

Column	Explanation
Name, ID, etc.	Student Identifying Information
HW3-Admin	total score for general/administrative - up to 20 points
HW3-Q1	Question 1 score (out of 5 points)
HW3-Q2	Question 2 score (out of 5 points)
HW3-Q3	Question 3 score (out of 10 points)
HW3-Q4	Question 4 score (out of 10 points)
HW3-Q5	Question 5 score (out of 10 points)
HW3-Q6	Question 6 (Essay) score (up to 30 points)
HW3-Q7	Question 7 score (out of 15 points)
HW3-TopEssays	indicate (Top 5-7/All Others) if this was one of the best 5-7 essays?
HW3-EssayComments	specific details and comments on Question 6 (essays)
HW3-OtherTACComments	Comments about anything except Q6, including late/missing details
HW3-Total	Total Score on Assignment 3 (maximum 105 points, but we'll treat as 100.)