

Statistics 104 - Assignment 2

Wednesday Oct 25, 2023 at 11pm

- P1: Exercise 1 on page 73
- P2: Exercise 2 on page 73
- P3: Exercise 3 on page 73
- P4: Exercise 7 on page 74
- P5: Exercise 8 on page 74
- P6: Exercise 10 on page 74
- P7: Exercise 12 on page 74
- P8: Exercise 18 on page 75

Please, note, permutation tests require that you enumerate all possible permutation. That number can be large. For problems 1-3, I suggest that you read all three problems and then calculate the statistics for problems 1 and 2 simultaneously. For problem 8, you can use a simulation of the permutation test. We will discuss this briefly in class and the TA will also be asked to help you with the simulation. R code will also be provided. For problems 10 and 12, you can use R to carry out the calculations but you must write your own code. You cannot use already created R functions such as `wilcox.test`. You must show your work. If you use R to calculate quantities, please, add the R code as **an appendix** to your assignment. Clearly label, which problem code is for. If we cannot figure out the connection between solutions and R code, you will not receive credit and we will not regrade it after you explain it to us. Problem 18 can be done using `wilcox.test`. You need to explain all results and interpret them. You will also need to discuss the differences between the various methods.

Please, note, that there will be no late homework. This assignment is due 2 days before the midterm. Solutions will be posted within a few hours of the submission deadline. Students who plan and submit by the deadline should have sufficient time to look at solutions and ask questions prior to the midterm on Oct 27.