

STA 261s2006 Assignment 7

Do this assignment in preparation for Test 2, which will be in Lecture on Wednesday March 1st. The questions are practice for the test, and are not to be handed in. Note that each question uses one of the data sets at the end of this assignment. In each case, please assume that the data are a random sample from the specified distribution.

1. Do exercise 10.50. Calculate your estimators using Data Set 1. The answer is a pair of numbers. My answer is (10.13, 5.7).
2. Do exercise 10.51. Calculate your estimator using Data Set 2. The answer is a single number. My answer is 0.22.
3. Do exercise 10.52. Calculate your estimator using Data Set 3. The answer is a single number. My answer is 7.22.
4. Do exercise 10.53. Calculate your estimator using Data Set 4. The answer is a single number. My answer is 4.17.
5. Do exercise 10.55. Calculate your estimator using Data Set 3. The answer is a single number. My answer is 10.84.
6. Do exercise 10.58. Calculate your estimator using Data Set 5. The answer is a single number. My answer is 0.53.
7. Do exercise 10.59. Calculate your estimator using Data Set 4. The answer is a single number. My answer is 4.17.
8. Do exercise 10.61. Calculate your estimator using Data Set 6. The answer is a single number. My answer is 2.67.
9. Do exercise 10.62. Calculate your estimator using Data Set 1, assuming $\mu = 10$. The answer is a single number. My answer is 2.14.
10. Do exercise 10.63. Calculate your estimator using Data Set 7. The answer is a single number. My answer is 0.19.
11. Do exercise 10.66. Calculate your estimators using Data Set 8. The answer is a pair of numbers. My answer is (2.05, 0.17).
12. Do exercise 10.67. Calculate your estimators using Data Set 3. The answer is a pair of numbers. My answer is (1.51, 6.88).

13. Do exercise 10.71. This one is particularly important; it is the basis of the most common method for testing whether there is an average difference between responses to a treatment and a control condition. We will refer to it later. Calculate your estimators using Data Set 1 for the V variables, and Data Set 3 for the W variables. The answer is a set of three numbers. My answer is (10.13, 3.61, 4.33).

Data Sets

1. **Data:** 11.03 7.17 8.09 12.76 11.59
2. **Data:** 0.05 0.12 0.07 0.64
3. **Data:** 6.88 1.80 2.95 4.92 1.51
4. **Data:** 8 3 3 6 3 2
5. **Data:** 0 1 2 2 1 3 2 1 3 1
6. **Data:** 1.38 8.20 5.19 6.58
7. **Data:** 9 4 4 7 4 3
8. **Data:** 2.05 2.12 2.07 2.64