

Instructions: Answer each question as thoroughly as possible. Round answers to 4 decimal places as needed. Exact answers are best when possible. Be sure to answer all parts of each question.

1. Do people taking two different routes of the same length take the same amount of time? Use the data in the table and conduct a permutation test of the data to see if the means are different.

| Transit times (h) | |
|------------------------|------------------------|
| Sample 1 (Treatment A) | Sample 2 (Treatment B) |
| 44 | 52 |
| 51 | 64 |
| 52 | 68 |
| 55 | 74 |
| 60 | 79 |
| 62 | 83 |
| 66 | 84 |
| 68 | 88 |
| 69 | 95 |
| 71 | 97 |
| 71 | 101 |
| 76 | 116 |
| 82 | |
| 91 | |
| 108 | |

2. Use bootstrapping to construct a 95% confidence interval of the data above. Compare the result to using a t-interval of the mean differences.