It has been suggested that treatment of a plastic used in optic lenses will improve wear. Four different treatments are to be tested. To determine whether any differences in mean wear exist among treatments, 28 castings were made from a single formulation of the plastic and seven castings were randomly assigned to each of the treatment groups. “Wear” was determined by measuring the increase in “haze” after 200 cycles of abrasion (better wear is indicated by a small increase).

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Treatment** |  |  |
| **A** | **B** | **C** | **D** |
| 9.12 | 11.95 | 11.47 | 11.35 |
| 13.29 | 15.15 | 9.54 | 8.63 |
| 12.07 | 14.74 | 11.26 | 10.10 |
| 11.95 | 14.79 | 13.56 | 9.75 |
| 13.31 | 15.48 | 11.18 | 11.71 |
| 12.32 | 13.47 | 15.03 | 12.45 |
| 11.68 | 13.06 | 14.86 | 12.38 |

1. Using SPSS to complete an analysis of your choice, can you determine a significant difference in mean wear among the four treatments? Use α = .05.
2. Estimate the mean difference in haze increase between treatments B and C using a 99% confidence interval
3. Find a 90% confidence interval for the mean wear for lenses receiving treatment A