

Statistics Assignments Using Excel[®] Assignment #7: Single Sample Tests

Part 1

The data below are from a study investigating the factors influencing performance on standardized math exams. It is known that the population mean on the exam is 77.45 ($\sigma = 7.95$). The group scores below are from a randomly collected sample of people who have had 2 years or more of foreign language coursework. Does this group differ significantly from the population? Use $\alpha = .05$.

75	84	81	95	62	77	79	84	61	98	87	81	79
74	79	88	84	74	98	92	74	51	99	84	85	78
88	69	91	84	79	77	84	82	94	84	81	80	77

1. Using Excel, perform the appropriate statistical test.
2. Label the worksheet for Part I “math test data”.
3. Using words, report the statistical results and your research conclusion in a text box.

Part 2

The data below are from a laboratory study investigating the effectiveness of a drug designed to reduce alcohol cravings in a sample of mice that are genetically bred with a predisposition toward alcohol addiction. For the population of this type of mouse, it is known that its mean alcohol consumption is 600ml per day when alcohol is freely available. The data below are the daily consumption amounts for mice injected with Naltrexone, a drug designed to reduce alcohol cravings. Does the drug significantly reduce alcohol consumption? Use $\alpha = .05$.

455	610	545	620	410	380	290	330	410	580	620	550
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1. Using Excel, perform the appropriate statistical test.
2. Label the worksheet for Part 2 “mouse alcohol data”.
3. Using words, report the statistical results and your research conclusion in a text box.

Do a final save and submit your work.

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Microsoft Excel is a trademark of the Microsoft group of companies.

The following textbook contains detailed instructions for using spreadsheets in an introductory statistics class:
Tagler, M. J. (2009). *Understanding basic statistics with spreadsheets*. New York, NY: Pearson Custom.