

## Statistics Assignments Using Excel®

### Assignment #5: Skewness, Kurtosis, and Box Plots

Data Set #1: Day 1 water consumption (in milliliters) of 16 rats.

0.18	3.60	1.85	16.81	1.34	0.57	14.71	5.20
12.61	11.68	0.23	2.13	0.88	2.07	12.57	0.49

Data Set #2: 2004 Populations as Reported by the US Census Bureau:

Alabama	4,530,182	Missouri	5,754,618
Alaska	655,435	Montana	926,865
Arizona	5,743,834	Nebraska	1,747,214
Arkansas	2,752,629	Nevada	2,334,771
California	35,893,799	New Hampshire	1,299,500
Colorado	4,601,403	New Jersey	8,698,879
Connecticut	3,503,604	New Mexico	1,903,289
Delaware	830,364	New York	19,227,088
DC	553,523	North Carolina	8,541,221
Florida	17,397,161	North Dakota	634,366
Georgia	8,829,383	Ohio	11,459,011
Hawaii	1,262,840	Oklahoma	3,523,553
Idaho	1,393,262	Oregon	3,594,586
Illinois	12,713,634	Pennsylvania	12,406,292
Indiana	6,237,569	Rhode Island	1,080,632
Iowa	2,954,451	South Carolina	4,198,068
Kansas	2,735,502	South Dakota	770,883
Kentucky	4,145,922	Tennessee	5,900,962
Louisiana	4,515,770	Texas	22,490,022
Maine	1,317,253	Utah	2,389,039
Maryland	5,558,058	Vermont	621,394
Massachusetts	6,416,505	Virginia	7,459,827
Michigan	10,112,620	Washington	6,203,788
Minnesota	5,100,958	West Virginia	1,815,354
Mississippi	2,902,966	Wisconsin	5,509,026
		Wyoming	506,529

- 1) Enter each data set into separate sheets in a single spreadsheet workbook
- 2) Determine the mean, median, skewness, and kurtosis for each set of data.
- 3) For the rat data, determine the estimated population variance and the estimated population standard deviation.
- 4) For the population data, determine the population variance and population standard deviation.
- 5) Create a box plot for each set of data.
- 6) Insert a textbox into each sheet and describe your results in words.
- 7) 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.