**ITEC 610**

**Applied Managerial Statistics**

**Describing Data Assignment**

Show all work.

Unsubstantiated answers receive no credit.

Be sure to attach all output from Excel/R/R.

No deadline extension will be given.

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Honor Code

All work on this assignment is my own. I have not discussed this assignment with anyone (except for Dr. Mahsa Oroojeni) in any way (including, but not limited to, text messages, email, face-to-face, fax, tweets, etc.) Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Describing Data**

1) The following is a list of prices (in dollars) of birthday cards found in various drug stores:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 2.45 | 1.20 | 0.85 | 1.33 | 2.25 |
| 2.25 | 2.09 | 2.99 | 1.00 | 0.88 |
| 1.42 | 2.36 | 2.15 | 2.85 | 1.52 |
| 1.99 | 2.38 | 0.85 | 2.22 | 2.75 |

1. Using Excel/R find the mean, median, mode, range, variance and standard deviation of the data. Attach your output from Excel/R.
2. Using Excel/R, construct a frequency histogram of the data set. Use the guidelines in the class notes. Provide all the details (interval, width, etc.) on how you constructed the histogram. Make sure that you attach the histogram created by Excel/R. Comment on the shape of the frequency distribution (e.g., is the distribution skewed? Is the distribution approximately mound-shaped and symmetric?) for the data set based on your histogram.
3. Based on the results in part a, construct the intervals  and for the data set. Be sure to show your interval below. Based on the results in part b what percentage of the measurements for the data set falls in each interval?

2) A semiconductor manufacturer produces printed circuit boards that are sampled to determine the thickness of their copper plating. The following statements create a data set named *Trans*, which contains the plating thicknesses (*Thick*) of 50 boards:

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 3.412 | 3.45 | 3.551 | 3.451 | 3.60 | 3.462 | 3.586 | 3.645 | 3.252 | 3.62 |
| 3.606 | 3.634 | 3.852 | 3.56 | 3.342 | 3.341 | 3.444 | 3.774 | 3.632 | 3.199 |
| 3.71 | 3.654 | 3.723 | 3.981 | 3.934 | 3.708 | 3.934 | 3.315 | 3.762 | 3.223 |
| 3.469 | 3.481 | 3.515 | 3.535 | 3.46 | 3.575 | 3.488 | 3.515 | 3.484 | 3.482 |
| 3.517 | 3.483 | 3.467 | 3.467 | 3.502 | 3.471 | 3.516 | 3.474 | 3.5 | 3.466 |

1. Using Excel/R find the mean, median, mode, range, variance and standard deviation of the data. Attach your output from Excel/R.
2. Based on the results in part a, construct the intervals  and for the data set. Be sure to show your interval below. What percentage of the measurements for the data set falls in each interval? Compare the intervals , and . Explain why the results are different.

Thank you!