

## MA 105 Ch. 2, 3 Practice

**Directions:** Below are 5 different data sets. You will be practicing the data analysis skills you have learned in chapters 2 and 3. Complete each question for the data sets indicated.

1. Construct a histogram of the data, using 5 classes. (sets 2 and 3)
2. Describe the distribution. What shape best describes the distribution? (sets 2 and 3)
3. Calculate the mean and median (all sets). Are the mean and median of the same data set relatively similar? (sets 2 and 3 only) If not, which is larger, and would you expect that to be true for other distributions of this type?
4. Calculate the range, standard deviation, and variance. (all sets)
5. Identify any potential outliers. Test to see if any of these values are unusual. (all sets)
6. Compare and contrast the data set 1 and 3. Does it make sense to directly compare the means and the standard deviations? Why or why not?
7. List at least 2 reasonable ways of displaying the data or a summary of the data (be specific). List at least one type of graph or table that would not be appropriate or useful for that data and explain why. (sets 4 and 5).

### Data Set 1

This data set consists of the numbers of years that popes (since 1690) lived after their election or coronation.

2, 9, 21, 3, 6, 10, 18, 11, 6, 25, 23, 6, 2, 15, 32, 25, 11, 8, 17, 19, 5, 15, 0, 26

### Data Set 2

This data set consists of the numbers of years that British monarchs (since 1690) lived after their election or coronation.

17, 6, 13, 12, 13, 33, 59, 10, 7, 63, 9, 25, 36, 15

### Data Set 3

This data set consists of the times (in minutes) spent on hygiene and grooming in the morning from randomly selected subjects.

0, 5, 12, 15, 15, 20, 22, 24, 25, 25, 25, 27, 27, 28, 30, 30, 35, 35, 40, 45

### Data Set 4

This data set consists of the daily weather information (date, highest temperature, lowest temperature, precipitation amount) for Lexington, VA from 1971 to 2000 (see <http://www.sercc.com/cgi-bin/sercc/cliMAIN.pl?va4876> for the complete data set).

### Data Set 5

This data consists of voter information from exit polls from the recent election cycle and includes who the individual voted for, their age, gender, race, level of education, and household income.