Name: _____ Date: _____

1. Identify the Five-Number Summary number for the data of Johnny's test scores and draw the Box & Whisker plot.
   92, 96, 97, 83, 92, 58, 93, 88, 77, 48, 65, 80, 71

   What is the range? _____ IQR? _____   MAD? _____
   Are there any outliers in the data set?

2. A student gets the following grades on tests for the semester: 74, 78, 84, _____, 88, and _____. If they have a mean of 85, a median of 86, and a range of 21, what are the 2 missing test grades?

3. Describe the shape, spread, and unusual features of the distribution. Estimate the center.
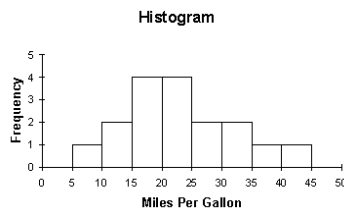
4. Construct a frequency table from the following information:
A survey of 200 9th and 10th graders was given to determine what their favorite subject was. 72 said Math (50 which were freshmen), 38 said Social Studies (20 which were sophomores), and 40 freshmen and 50 sophomores said PE was their favorite.

|				Total
Total				

Based on your table above, answer the following questions:
   a) If we only look at the sophomores, what percentage of them like social studies? _____
   b) What is the probability of picking a freshman who likes P.E.? _____
   c) What is the marginal probability that a student surveyed is a freshman? _____
   d) What is the marginal probability that a student surveyed likes Math? _____
   e) If a student likes Math, what is the conditional probability that they are a freshman?_____

5. For the given data, find the equation for the given exponential. Round your answers to 2 decimal places.

x	1	2	3	4	5	6
y	0.25	0.75	1	3	19	70

6. Estimate the correlation coefficient for the following graphs.
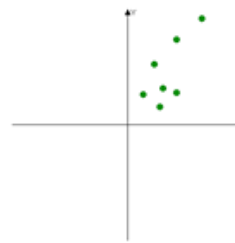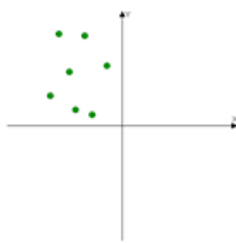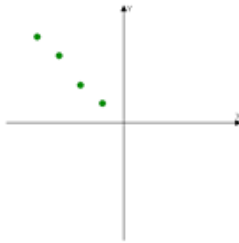
7. Determine if the following situations represent a positive, negative, or no correlation.
   a) Number of hours studying for the SAT and your score. _____
   b) The distance you drive and the number of stars in the sky. _____
   c) The temperature and the length of daylight hours for the day _____

8. Tell whether the following situations are causation: (yes or no)
   a) The number of boats on Lake Allatoona and the number of cars on the street ____
   b) The hours you work and the money you make _____
   c) The time spent studying and the A on the test _____

9. The following table shows a person study hours versus their test scores.

Hours studied (x)	2	5	1	0	4	2	3
Grade on test (y)	77	92	70	63	90	75	84

   a) Use your calculator to find the line of best fit for the data above. _____
   b) What is the value of r? _____ Is this a good fit? _____
   c) Use the equation to predict the test grade for someone who studies 5.5 hours. ___

10. Use the table of maximum load allowances for various heights of spruce columns.

   a) Find a quadratic regression equation to model the max load given height. Round to the nearest tenths.

   b) Use your model to predict the maximum load allowed for an 8-foot spruce column.

Maximum Load Allowance No. 1 Common Spruce	
Height of Column (ft)	Maximum Load (lb)
4	7280
5	7100
6	6650
7	5960