Assignment 1

Copying answers and steps are strictly forbidden. Evidence of copying results in zero for copied and copier. Working together is encouraged, share ideas not calculations. Explain your steps. The calculations and answers should be written neatly on paper which is attached as a single pdf. Box your answers where appropriate. Thanks!

Question Number 1

The data show the number of named storms each year for the last 40 years. **Construct** and **analyze**

a) a **dotplot** for the data
b) **stem and leaf plot** for the data

19	15	14	7	6	11	11
9	16	8	8	11	9	8
16	12	13	14	13	12	7
15	15	19	11	4	6	13
10	15	7	12	6	10	
28	12	8	7	12	9	

Source: NOAA.

Question Number 2

Millionaires. The ages of the 36 millionaires sampled are arranged in increasing order in the following table.

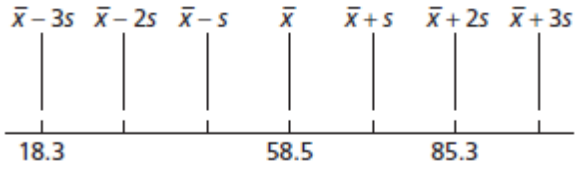
31	38	39	39	42	42	45	47	48
48	48	52	52	53	54	55	57	59
60	61	64	64	66	66	67	68	68
69	71	71	74	75	77	79	79	79

a. Determine the quartiles for the data.
b. Obtain and interpret the interquartile range.
c. Find and interpret the five-number summary.
d. Calculate the lower and upper limits.
e. Identify potential outliers, if any.
f. Construct and interpret a boxplot.

Question Number 3

Millionaires. Dr. Thomas Stanley of Georgia State University has collected information on millionaires, including their ages, since 1973. A sample of 36 millionaires has a mean age of 58.5 years and a standard deviation of 13.4 years.

a. Complete the following graph.



Question Number 4

Calculate for each table given below also calculate Mean ,Median and Variance for group distribution table(freq.distr.table)

a. determine a frequency distribution.
b. obtain a relative-frequency distribution.
c. construct a frequency histogram based on your result from part (a).
d. construct a relative-frequency histogram based on your result from part (b).

Fuel Tank Capacity. *Consumer Reports* provides information on new automobile models, including price, mileage ratings, engine size, body size, and indicators of features. A simple random sample of 35 new models yielded the following data on fuel tank capacity, in gallons. Use cutpoint grouping with 12 as the first cutpoint and classes of equal width 2.

17.2	23.1	17.5	15.7	19.8	16.9	15.3
18.5	18.5	25.5	18.0	17.5	14.5	20.0
17.0	20.0	24.0	26.0	18.1	21.0	19.3
20.0	20.0	12.5	13.2	15.9	14.5	22.2
21.1	14.4	25.0	26.4	16.9	16.4	23.0

Number of Siblings. Professor Weiss asked his introductory statistics students to state how many siblings they have. The responses are shown in the following table. Use single-value grouping.

1	3	2	1	1	0	1	1
3	0	2	2	1	2	0	2
1	2	2	1	0	1	1	1
1	1	0	2	0	3	4	2
0	2	1	1	2	1	1	0

Cheese Consumption. The U.S. Department of Agriculture reports in *Food Consumption, Prices, and Expenditures* that the average American consumed about 32 lb of cheese in 2007. Cheese consumption has increased steadily since 1960, when the average American ate only 8.3 lb of cheese annually. The following table provides last year's cheese consumption, in pounds, for 35 randomly selected Americans. Use limit grouping with a first class of 20–22 and a class width of 3.

44	27	31	36	40	38	32
31	30	34	26	45	24	40
34	30	43	22	37	26	31
42	31	24	35	25	29	34
35	35	34	20	42	34	27