Name **MAT 330-Introduction to Statistics**
Date **Assignment #3**

For Problems 1-3 use the specified number of classes to do the following:

- ***a. Find the class width.***
- ***b. Make a frequency table showing class limits, class boundaries, midpoints, frequencies, relative frequencies, and cumulative frequencies.***
- ***c. Draw a histogram.***
- ***d. Categorize the basic distribution shape as uniform, mound-shaped symmetrical, bimodal, skewed left, or right.***
- ***e. Draw an ogive.***

1. ***Sports: Dog Sled Racing***-How long does it take to finish the 1161-mile Iditarod Dog Sled Race from Anchorage to Nome, Alaska? Finish times (to the nearest hour) for 57 dogsled teams are shown here.

261	271	236	244	279	296	284	299	288	288	247	256
338	360	341	333	261	266	287	296	313	311	307	307
299	303	277	283	304	305	288	290	288	289	297	299
332	330	309	328	307	328	285	291	295	298	306	315
310	318	318	320	333	321	323	324	327			

Use five classes.

2. ***Medicine: Glucose Testing-***The following data represent blood glucose levels (mg/100 ml) after a 12-hour fast for a random sample of 70 women.

45	66	83	71	76	64	59	59
76	82	80	81	85	77	82	90
87	72	79	69	83	71	87	69
81	76	96	83	67	94	101	94
89	94	73	99	93	85	83	80
78	80	85	83	84	74	81	70
65	89	70	80	84	77	65	46
80	70	75	45	101	71	109	73
73	80	72	81	63	74		

Use six classes

3. ***Medicine: Tumor Recurrence***-Certain kinds of tumors tend to recur. The following data represent the lengths of time, in months, for a tumor to recur after chemotherapy.

19	18	17	1	21	22	54	46	25	49
50	1	59	39	43	39	5	9	38	18
14	45	54	59	46	50	29	12	19	36
38	40	43	41	10	50	41	25	19	39
27	20								

Use five classes.

4. Make a time-series graph for the data in the following table:

Distance (in miles) Walked/Jogged in 30 minutes

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Distance	1.5	1.4	1.7	1.6	1.9	2.0	1.8	2.0	1.9	2.0	2.1	2.1	2.3	2.3	2.2	2.4	2.5	2.6	2.4	2.7

Note: Make sure to label the horizontal and vertical axes (i.e. Weeks vs. Distance)

5. Make a Pareto chart for the following table:

Causes for Lateness

Cause	Frequency
Snoozing after alarm goes off	15
Car Trouble	5
Too long over breakfast	13
Last-minute studying	20
Finding something to wear	8
Talking too long with roommate	9
Other	3

Note: Make sure to label the causes and draw the bars using the same vertical scale.

6. For the following data:

19.1	18.4	17.7	11.0	11.0
15.5	18.0	15.5	15.2	13.5
19.7	15.5	14.5	12.3	16.8
18.2	10.9	13.5	11.1	15.5

a. Compute the mean, median, mode, range, and interquartile (IQR).
b. Construct a stem-and-leaf and box-and-whisker plots.
c. Categorize the basic distribution shape as uniform, mound-shaped symmetrical, bimodal, skewed left, or right.