Math E-3

ASSIGNMENT 4 **Total possible points = 51**

NAME:

Round to 1 decimal point ("d.p.") for all problems, unless otherwise specified.

Show your work for full or partial credit.

Problem 1

Here is a similar data set to the one given in Chapter 4. Draw the histogram indicated below. It will help if you set up some kind of tally. We will award **1 point extra credit for setting up a neat stem and leaf display.**

In a large room of people, the age of each person was obtained. Here are the data:

26	43	18	42	12	65	30	18
37	23	36	47	42	16	51	41
29	15	29	31	47	54	41	34
43	22	50	43	38	32	46	60

Extra Credit: Stem and Leaf Diagram: **1 point**

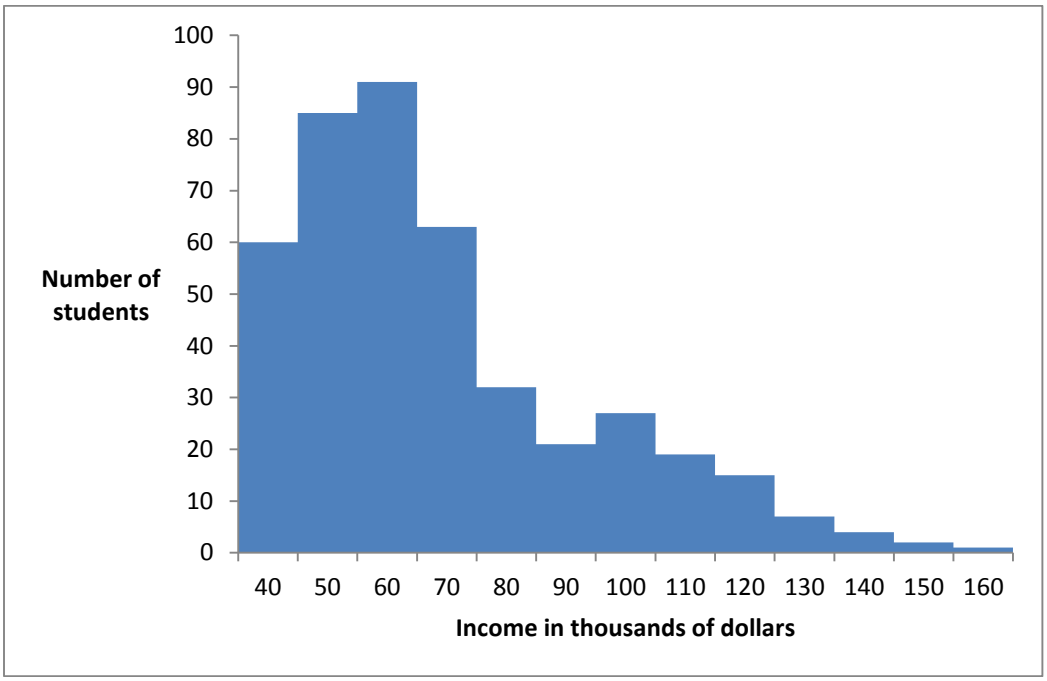
First Pass:

Second Pass:

Draw a histogram of this data using a **class interval size of 5**, **starting at 10. (HINT: refer to bottom of page 1 of the reading).** **4 points**

For problems 2 -6

The histogram below shows the number of students in an incoming freshman class of a local university receiving financial aid and the average income of their families.



2. Can you find the exact number of freshman receiving financial aid? Why or why not?

1 point

3. *Estimate* the number of students receiving financial aid.

2 points

4. What is missing from this graph?

1 point

5. Describe its shape?

1 point

6. Estimate the average income of the students' families' receiving financial aid? (Answers will differ.) **2 points**

Problems 7-14

Grades for Accounting 101 quiz. The data below gives the grades on an accounting quiz. The highest grade was a 90 and the lowest, a 20.

	Frequency
Grade	**# of Students who received that grade**
20	2
50	5
60	7
70	13
80	4
90	1

7. Draw the histogram for this distribution of grades. **Do not forget labels, including a title.**

3 points

8. Describe its shape.

1 point

Find the measures of center:

9. Find the mean grade. **Round answer to 1 dp (e.g. if you got an answer of 36.325, you would round to 36.3).**

2 points

10. Find the median grade **2 points**

11. Find the mode **1 point**

12. Which is greater, the mean or the median? Why? **2 points**

Find the measures of spread:

13. range **1 point**

14. Calculate the standard deviation. (Note: You must do the calculation of the standard deviation as we did in class. I have set up the table for you to get you started. However, you must be able to set it up on an exam without benefit of notes. **Round <u>final</u> answer to 1 dp.**

4 points

X	(X – x-bar)	$(X – x\text{-bar})^2$	f	$(X – x\text{-bar})^2 * f$

Problems 15-18

The table below describes the parking rates per day at 31 different parking garages in and around the city of Boston.

Parking rate	Number of garages at that price
$16	3
$18.50	6
$21	8
$22.5	5
$24	4
$26	3
$45	2

15. Draw the histogram for this data. **3 points**

16. Calculate the mean parking rate at these garages. **Round to 2 dp.** **2 points**

17. Calculate the median parking rate at these garages. **2 points**

18. What percentage of the parking garages had rates that were less than the mean parking rate? **Round to 1 dp.** **2 points**

Problems 19-25

Given: the following frequency table of the heights of women on a college soccer team.

Height in inches	Frequency
65	1
66	4
67	6
68	11
69	7
71	5
72	1

19. Draw the histogram for these data. **3 points**

20. Describe its shape. **1 point**

Find the measures of center:

21. mean **Round to 1 dp.** **2 points**

22. median **2 points**

23. mode **1 point**

Find the measures of spread, height (in inches).

24. range **1 point**

25. Calculate standard deviation. **Round <u>final</u> answer to 1 dp.** **4 points**

X	(X – x-bar)	$(X – x\text{-bar})^2$	f	$(X – x\text{-bar})^2 * f$