

Graded Homework Set #3 (8 problems)

1. The following data represent the number of customers waiting for a table at 6 p.m. (1800-Navy time) for 40 customers on a Friday night at Pilgrims' Progress Restaurant:

Data:

11, 5, 11, 3, 4, 5, 13, 9, 13, 10, 9, 6, 10, 8, 7, 3, 7, 9, 10, 4, 6, 8, 6, 7, 6, 4, 14,
11, 8, 10, 9, 5, 8, 8, 7, 8, 8, 6, 11, 8

- a. Construct a histogram representing this data. Use classes of 1 to 3, 4 to 6, 7 to 9, etc. (See page 79)
 - b. Use this histogram to estimate the average number of customers waiting for a table at Pilgrims' Progress restaurant at 6 p.m. on any Friday night.
2. Construct a stem and leaf plot for the following data representing a sample of 20 days showing the number of cardiograms done each day at the Sisters of Mercy Hospital (See page 82)

25, 31, 20, 32, 13, 14, 43, 2, 57, 23, 36, 32, 33, 32, 44, 32, 52, 44, 51, 45

Consider the following data for the ages of 10 college students.

Data: 18, 24, 23, 35, 19, 23, 26, 23, 19, 20

3. For the above data, find: (See page 121)
 - a. The mean
 - b. The mode
 - c. The median
4. For the above data, find: (See page 137)
 - a. The standard deviation
 - b. The range
 - c. The midrange (See page 137, top of page, problem #52)
 - d. The range rule of thumb (see page 412, bottom area of page) for the standard deviation estimate.
5. For the above data, find: (See page 167)
 - a. The 80th percentile cutoff number of goals
 - b. Q_1
 - c. Q_3

6. For the above data, construct a box plot. Include your scale and the 5 summary points necessary to form this plot. (See page 177)

7. a. Construct a back-to-back stem and leaf plot for the following data representing the number of grams of fat in 14 sandwiches served at McDonalds and 14 sandwiches served at Burger King.
(See page 95)

McDonalds

48	10	30	14
32	17	34	37
21	23	26	26
27	26		

Burger King

67	19	15	59
24	40	42	36
26	43	43	48
27	28		

b. Compare the two distributions. Are there any observable differences? If so, what are they? Please explain.

8. The following table represents the number of offenses for various robbery categories in the year 2006:

Types of Robbery	Number (in thousands)
Street of Highway	131
Commercial	61
Gas Station	10
Convenience Store	26
Residence	41
Bank	7

- What percent of the robberies were in the Residence category?
- A pie chart is a circular representation of data. If there are 360° in a circle, how many degrees would be needed to represent the Residence robberies?
- Construct a pie chart for the above data. (See page 66)