Descriptive Statistics

Name:

1. The annual salaries of 10 office workers are listed below. Find the mean, median, and modal salaries of this group. Explain why the mode is an unsatisfactory measure of the middle in this case. Determine if the mean or median (or both) is a satisfactory measure of the center.

$23,000	$46,000	$23000	$38,000	$24,000	$23,000	$23,000
$38,000	$23,000	$32,000				

2. A basketball team scored 43, 55, 41, and 37 points in their first four games.

   a. What is the mean number of points scored for the first four matches?

   b. What score will the team need to shoot in the next game so that they maintain the same mean score?

   c. The team scores only 25 points in the fifth game. What is the mean number of points scored for the five games?

   d. How many points must the team score in the fifth game in order to increase the mean number of points scored per game by 3 points?

3. Jana had seven spelling tests, each with twelve words, but she could only find the results of five of them. These scores were: 9, 5, 7, 9, 10. She asked her teacher for the other two results and the teacher said that the mode of her scores was 9 and the mean was 8. What are the two missing results, give that Jana knows that her worst result was a 5?

4. For the data set below determine the median, the first quartile, the third quartile, the interquartile range, and construct a box plot.

11, 6, 7, 8, 13, 10, 8, 7, 5, 2, 9, 4, 4, 5, 8, 2, 3, 6

5. The times spent (in minutes) by 20 people waiting in a queue at a bank for a teller were:

3.4	2.1	3.8	2.2	4.5	1.4	0	0	1.6	4.8	1.5	1.9	0
3.6	5.2	2.7	3	0.8	3.8	3.8	5.2					

a. Find the median waiting time and the upper and lower quartiles.

b. Find the range and interquartile range of the waiting times.

c. Fill in the blank in each statement below.

i. 50% of the waiting times were greater than _____ minutes

ii. 75% of the waiting times were less than _____ minutes

iii. The minimum waiting time was _____ minutes and the maximum waiting time was _____ minutes.

iv. The waiting times were spread over _____ minutes.

6. Two baseball coaches compare the number of runs scored by their teams in their last ten games. The data is given in the table below.

A	0	10	1	9	11	0	8	5	6	7
B	4	3	4	1	4	11	7	6	12	5

a. Show that each team has the same mean and range of runs scored.

b. Which team's performance do you suspect is more variable over the period?

c. Check your answer in part b by finding the standard deviation for each distribution.