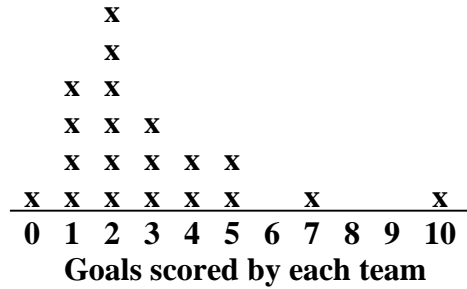Name:_____   **AP Statistics Chapter 1 Graded Assignment**

1) The dotplot below shows the numbers of goals scored by the 20 teams playing in a city's high school soccer games on a particular day:
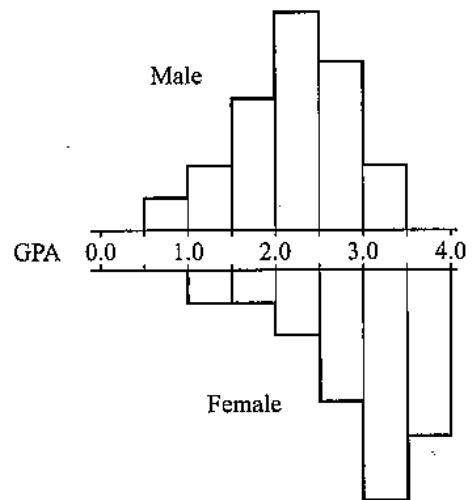
```
                                        X
                                        X
                                    X   X
a)  Describe the distribution:      X   X   X
                                    X   X   X   X   X
                                    X X X X X X       X           X
                                    0 1 2 3 4 5 6 7 8 9 10
                                    Goals scored by each team
```

b) One superstar scored six goals but his team still lost. What are all the possible final scores for that game? Explain your answer.
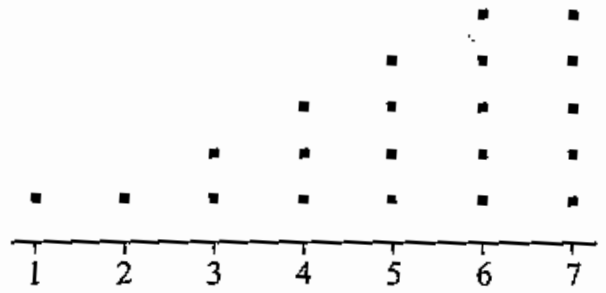
c) Is it possible that all of the teams scoring exactly two goals won their games? Explain.

2) The GPAs of random samples of 50 male and 50 female students at a large university are notes and summarized at the right. Write a few sentences comparing the distributions of GPAs of males and female students at this university.

3) Consider the following dotplot:

a) Calculate and compare the mean and median.

b) Comment on whether or not your answer was what you expected.

4. Twenty college graduates were asked their starting salaries at their first jobs:

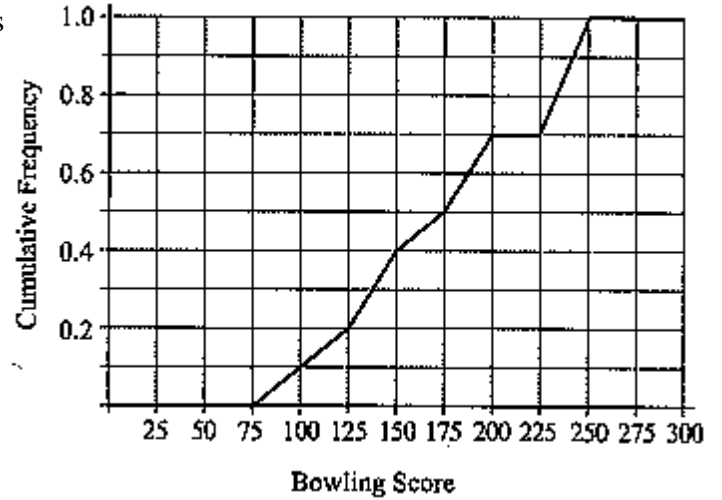| salary (in $1000s)	0-10	10-20	20-30	30-40	40-50
frequency	1	0	10	5	4

a) Draw a cumulative frequency plot of this data.

b) If given the raw data, would the mean or median best describe the typical starting salary for college students? Explain.

5. A cumulative relative frequency plot for blowing scores during one week in league play is shown at right:

a) Interpret in context the meaning of the point (125, 0.2)
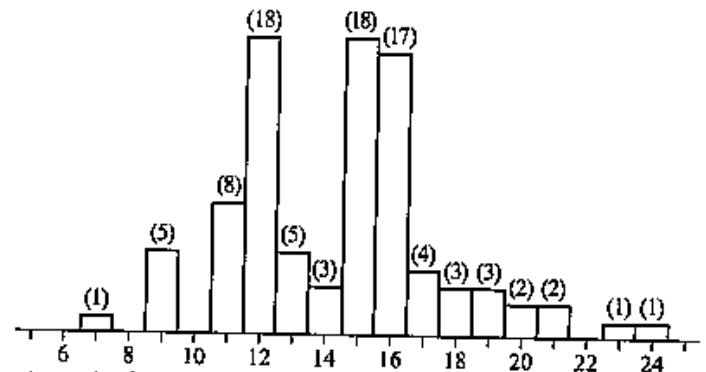

Bowling Score

b) What is the median score?

c) What proportion of the scores were over 200?

d) What does the flat portion between 200 and 225 mean?
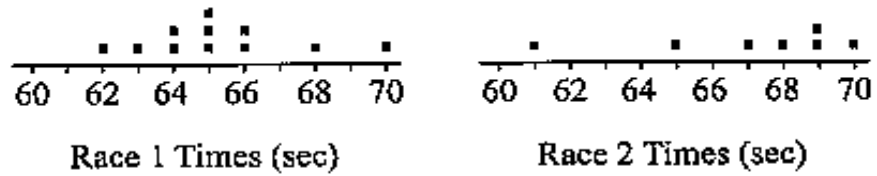
6) A set of 91 scores has the histogram at right:

a) Draw a boxplot of the above data.

b) What feature does the histogram show that is missed by the boxplot?

c) What feature is more clearly distinguished in the boxplot than in the histogram?

7) In the first two races at the dog track, the times (in seconds) of the dogs are given by the dotplots shown below:

Race 1 Times (sec)   Race 2 Times (sec)

a) In either race, are any of the times considered to be outliers? Explain.

b) Each dog ran in one race but not both. If all the times are combined, does the new set of times have any outliers? Explain.

c) Explain the reason for the answer to (b) in relation to the answer to (a).