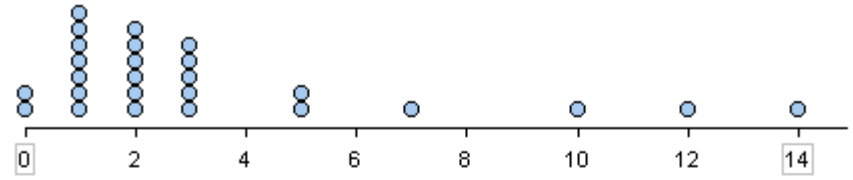
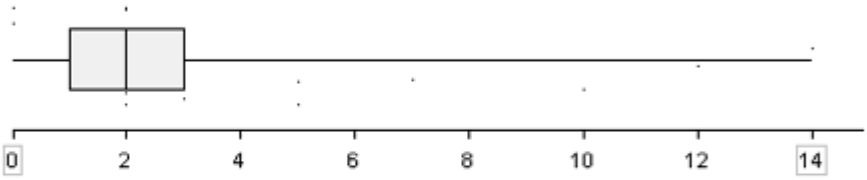
Math 45X – Practice Quiz #3

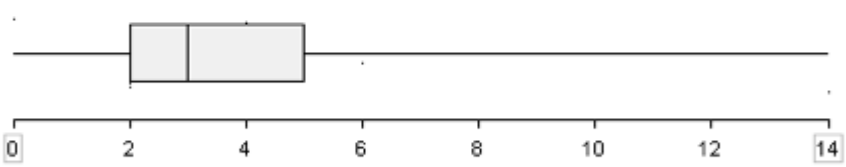
1) Which boxplot is a reasonable summary of the dotplot?



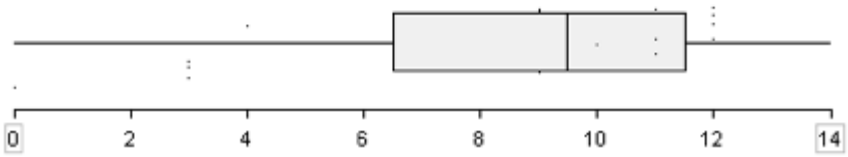
A



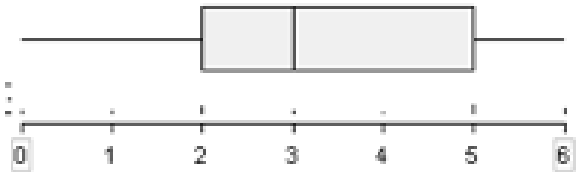
B



C



2) Which set of data matches the boxplot?



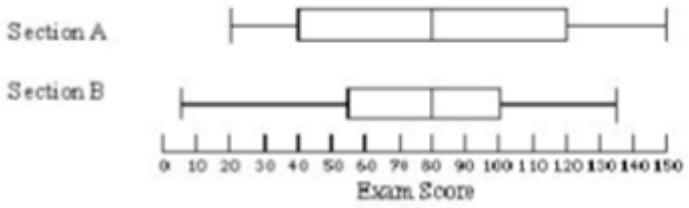
a). 0, 0, 2, 2, 3, 3, 4, 5, 5, 6
b). 0, 0, 2, 2, 2, 2, 4, 4, 4, 6, 6, 6
c). 0, 2, 2, 2, 3, 4, 5, 5, 6
d). all three data sets match the boxplot

3) Consider the ages of people in my family: 39, 48, 50, 63. Find the ADM _____

4) If we adopted a child into the family and she was 5 years old, which measurement would change the most?

a). Mean
b). Median
c). IQR
d). None of the above

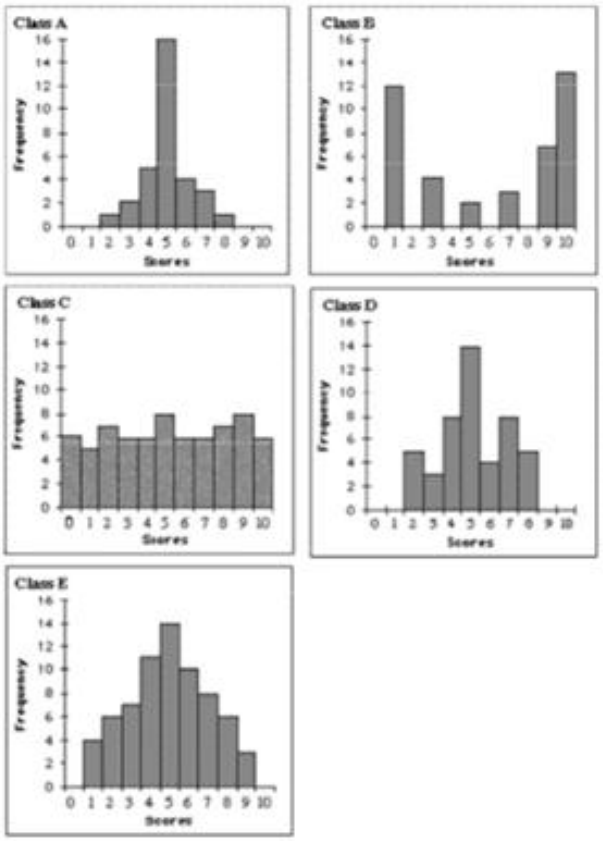
5) The boxplots display the distribution of exam scores for two different classes who took the same exam. Which data set has a greater percentage of students with scores at or above 30?



a). Both sections are about equal.
b). Section A
c). Section B
d). It is impossible to tell.

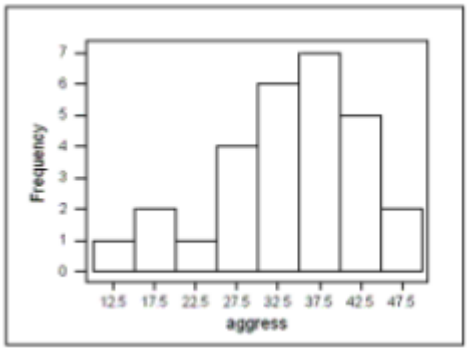
6) Which of the classes would you expect to have the **smallest** ADM, and why?

Five histograms are presented below. Each histogram displays test scores on a scale of 0 to 10 for one of five different statistics classes.



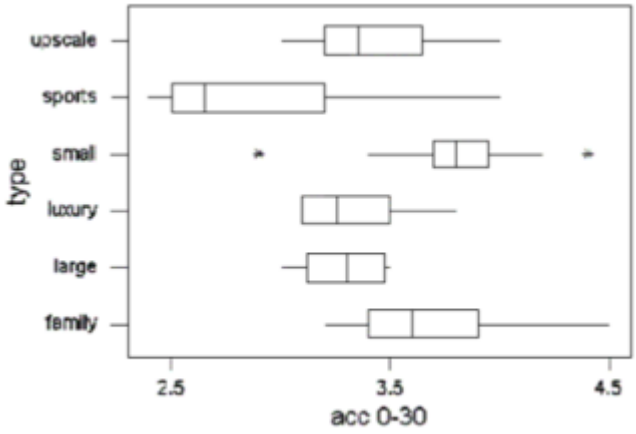
a). Class A and Class D, because they both have the smallest range.
b). Class C, because there are only very small changes in scores.
c). Class E, because it looks the most normal.
d). Class B, because it has the smallest number of distinct scores and the smallest number of scores at the median.
e). Class A, because it has the most values close to the mean.

7) A test to measure aggressive tendencies was given to a group of teenage boys who were members of a street gang. The test is scored from 10 to 60, with a high score indicating more aggression. The histogram represents the results for these 28 boys. Which two measures would be most appropriate to describe center and spread for this distribution?



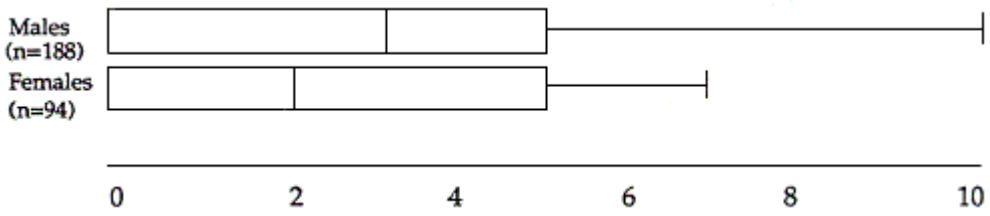
a). range and mean
b). mean and median
c). median and interquartile range
d). mean and average distance from the mean

8) The 1999 Consumer Reports new Car Buying Guide reported on the number of seconds required for a variety of cars to accelerate from 0 to 30 mph. The cars were also classified into six categories according to type. The boxplots for acceleration times for each type of car are shown below. If we compare a typical range of acceleration times for each car type, which type performs most consistently? What part of the boxplots did you compare to make your choice?



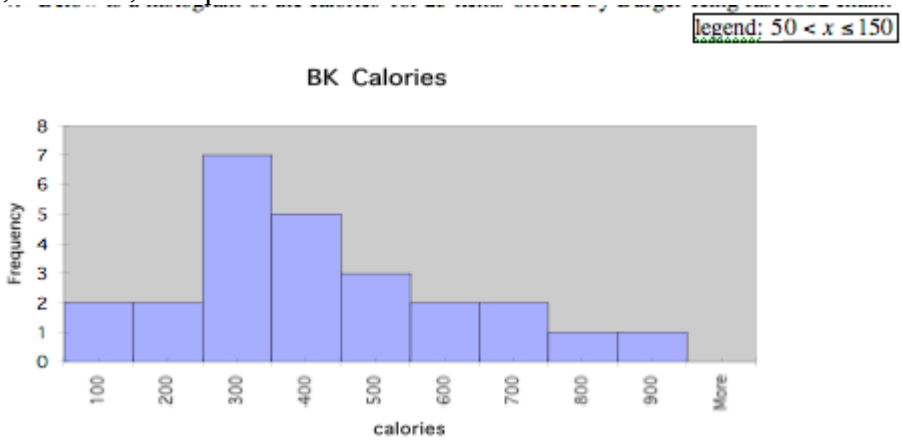
a). sports cars because they have the lowest value at 2.4.
b). large cars because the range is the shortest (length of the boxplot)
c). small cars because the interquartile range is the shortest.
d). sports cars because the median is the lowest

9) Do male college students spend more on junk food each week than females? An LMC Statistics student asked students around campus to estimate the amount they spent on junk food each week. The results are summarized in the boxplots. Do you think we can conclude that males in the sample spend more on junk food each week than females?



a). No, the difference in spending is due to the fact that more males answered the survey.
b). No, the difference in medians is not large compared to the variability (as measured by the interquartile range) in the data.
c). Yes. Males spent between 0 and 10 dollars compared to females who spent at most $7.
d). Yes, the median spending for males is higher than the median for females.

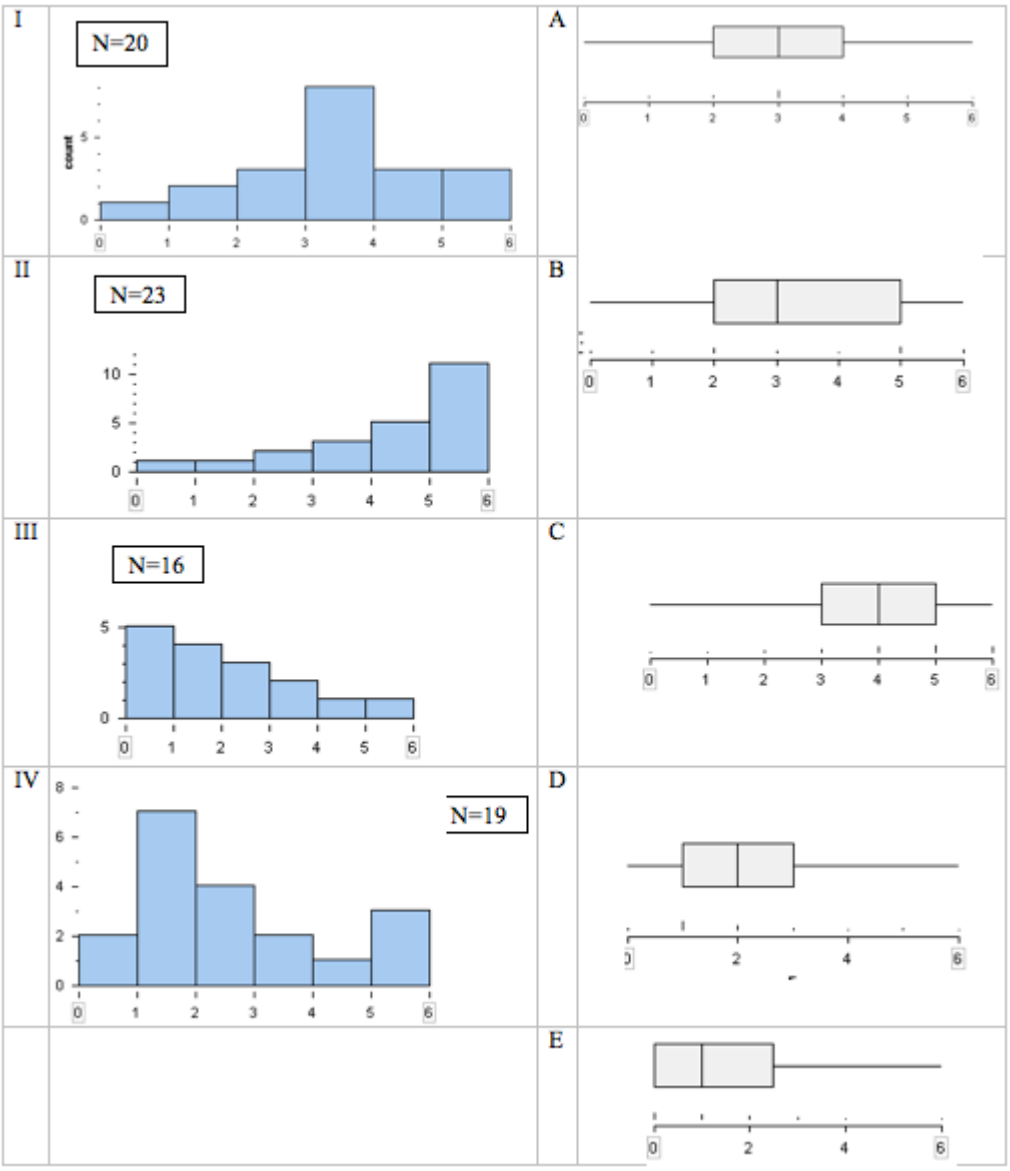
10) Below is a histogram of calories for 25 items at Burger King. (The right-hand endpoint of each bar is included in the bar. So 150 is in the first bar; 250 is in the 2nd bar, etc.). Is the **first quartile** greater than, less than, or equal to 250?



a). equal to 250.
b). greater than 250.
c). either less than or equal to 250; it is impossible to tell which.
d). less than 250.
e). either greater than or equal to 250; it is impossible to tell which.

Use the following for Questions #11 and #12.

Histograms and boxplots are different ways to graphically summarize data. Four different data sets were used to make the histograms and four of the five boxplots. (Note: In each histogram the value at the left-hand endpoint of the bar is included in the bar. For example, data values of 0 are included in the first bar, data values of 1 are included in the second bar.)



11) Which boxplot was created from the same data set as histogram I?

Answer: _____

12) Which boxplot was created from the same data set as histogram II?

Answer: _____