

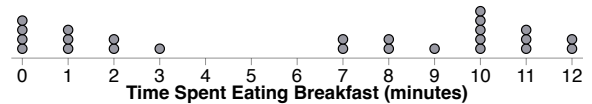
1. The number of days that experienced rainfall in the past year was recorded for a sample of 10 U.S. cities. Here are the data:

86, 112, 116, 118, 121, 127, 128, 136, 159, 166

- a. Determine the five-number summary of the distribution of days that experienced rainfall.
- b. Another city with 120 days of rainfall is added to the list. How would including this value change the five-number summary?

2. A random sample of students was asked how many minutes they typically spend eating breakfast. The dotplot shows the results.

- a. Determine the five-number summary of the distribution of time spent eating breakfast.



- b. Create a boxplot of the distribution.

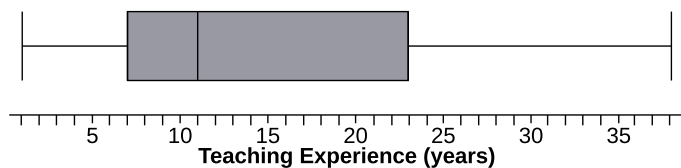
- c. Give two advantages of using the dotplot over the boxplot for displaying the data.

3. Eighteen different players on a college lacrosse team scored at least one goal in a recent season. The number of goals scored by each of these players is listed along with the summary statistics.

1, 1, 2, 2, 6, 8, 8, 10, 12, 14, 18, 19, 24, 32, 50, 51, 107, 121

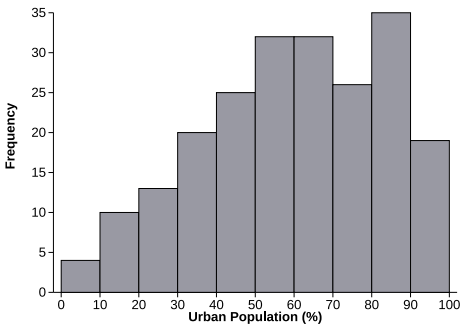
n	mean	SD	min	Q_1	med	Q_3	max
18	27	35.12	1	6	13	32	121

- a. Use the $1.5 \times \text{IQR}$ method to identify any outliers. Show your work.
- b. Use the $2 \times \text{SD}$ method to identify any outliers. Show your work.
- c. Predict the shape of the distribution. Justify.
- d. Create a boxplot.
4. A large high school has 148 teachers. The boxplot shows the distribution of the number of years of experience.



- a. Find and interpret the median number of years teaching experience.
- b. What percent of the teachers have 7 or more years of teaching experience?
- c. About how many of the teachers have between 7 and 23 years of experience?

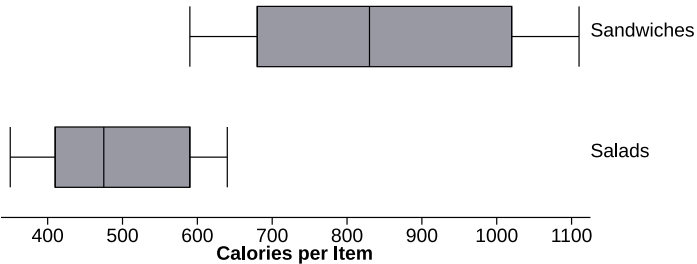
5. The histogram shows the distribution of the percent of the population that is urban for each of 216 countries/territories.
- a. Is it possible to calculate the median urban population percent from the information given in the graph? Explain.



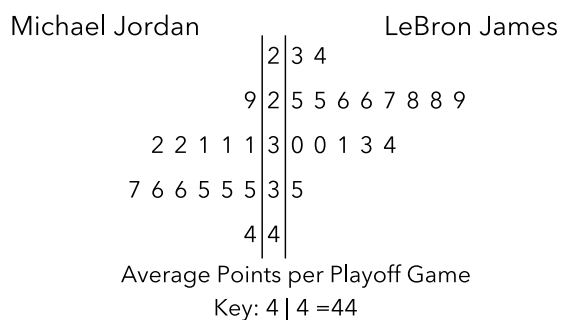
- b. What interval contains the first quartile of the urban population percent?

6. A local café posts the number of calories in each of their full-sized sandwiches and full-sized salads. The table shows each value for number of calories and the boxplots display the calorie distributions. Compare the distributions.

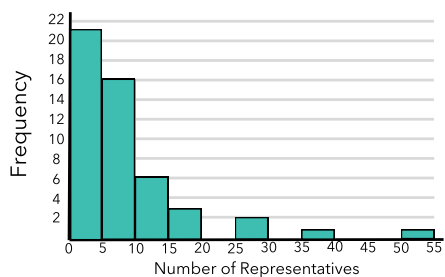
Sandwiches	1110, 1070, 970, 830, 960, 1080, 940, 810, 640, 760, 590, 720, 590
Salads	620, 500, 640, 450, 410, 560, 350, 410



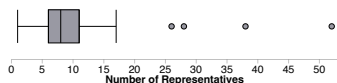
7. The stem and leaf plot shows the average points-per-game in the NBA playoffs, rounded to the nearest whole point, for two different NBA basketball players, Michael Jordan and LeBron James. Which of the following statements is true?



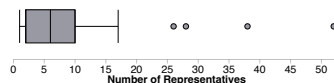
- A) The median of the average points-per-game for Jordan is less than the median of the average points-per-game for James.
- B) The range of the average points-per-game for Jordan is less than the range of the average points-per-game for James.
- C) The interquartile range is the same for both players.
- D) Both distributions are skewed to the right.
8. The histogram shows the distribution of the number of representatives in the U.S. House of Representatives for the 50 states. The four largest values (26, 28, 38, and 52) are all outliers. Which of the following boxplots could also represent the distribution of the number of representatives in the U.S. House of Representatives?



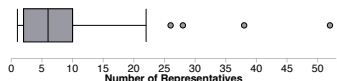
A)



B)



C)



D)

