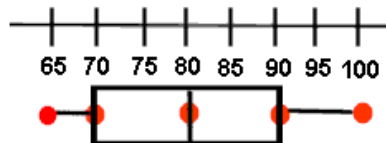


Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Aim:** How can we practice with box-and-whisker plots?

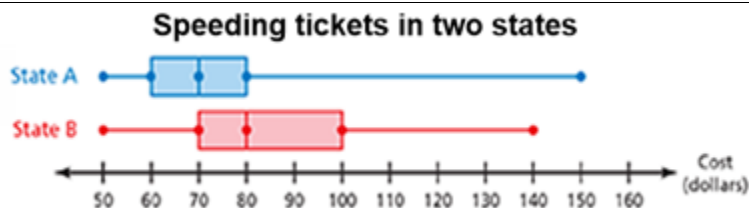
**Do Now:** The accompanying diagram shows a box and whisker plot of student test scores on an algebra midterm examination.



- a) What is the median score?
- b) What is the first quartile (lower quartile)?
- c) What is the third quartile (upper quartile)?
- d) What is the minimum value (lower extreme)?
- e) What is the maximum value (upper extreme)?
- f) What is the interquartile range?
- g) What is the range?
- h) What percent of the data is under 80?
- i) What percent of the data is above 70?
- h) What number is in the 75<sup>th</sup> percentile?
- i) What number is in the 25<sup>th</sup> percentile?

### Analyzing Box-and-Whisker Plots

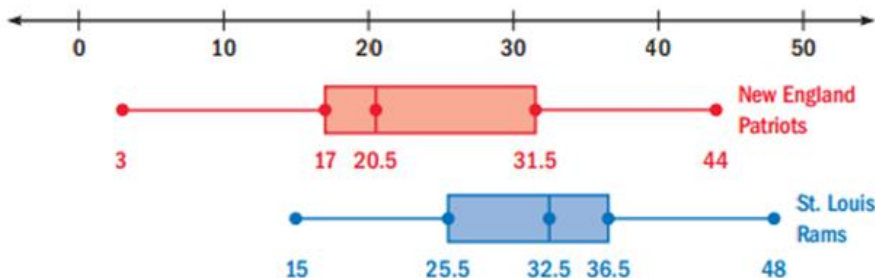
1)



What conclusions can be drawn regarding speeding tickets in the two states?

2)

**Football** The box-and-whisker plots below represent the number of points scored in each game of the 2001–2002 season for the New England Patriots and the St. Louis Rams. What conclusions can you make about the data?



### Constructing Box-and-Whisker Plots

3.) Construct a box-and-whisker plot for the following set of data:

Lower Extreme: 11, 23, 26, 13, 27, 26, 18, 29, 22, 25, 27, 30  
 Lower Quartile (Q1):  
 Median (Q2):  
 Upper Quartile (Q3):  
 Upper Extreme:

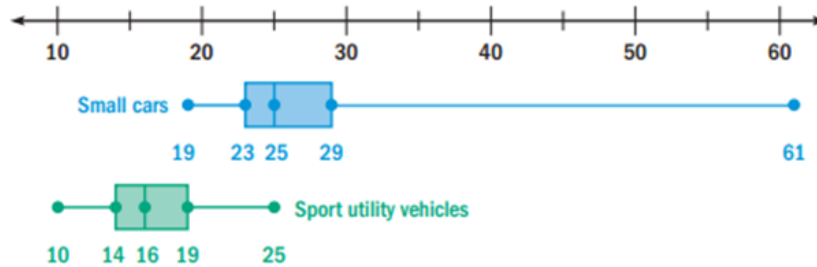


4.) Construct a box-and-whisker plot for the following set of data:

Lower Extreme: Prices of Haircuts: \$18, \$15, \$8, \$22, \$35, \$27, \$12, \$14, \$24  
 Lower Quartile (Q1):  
 Median (Q2):  
 Upper Quartile (Q3):  
 Upper Extreme:



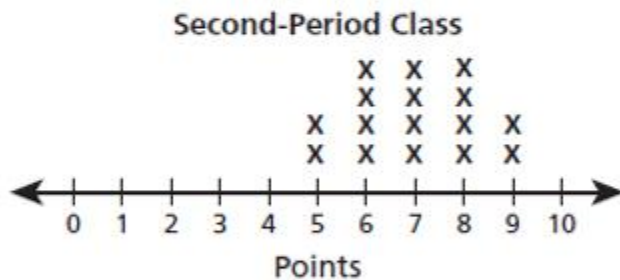
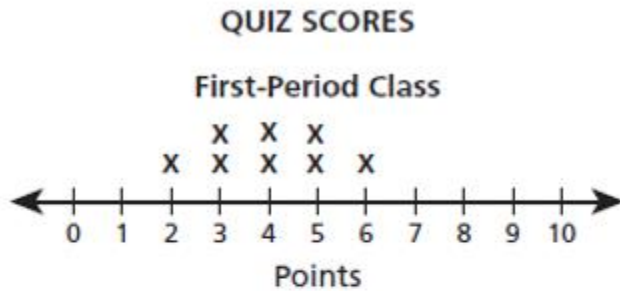
5.) Use the double box-and-whisker plot showing the average miles per gallon of gasoline used in city driving for 2002 models of small cars and sports utility vehicles to answer the questions below.



- a.) Make a conclusion comparing the two groups of vehicles.
- b.) What percent of the sports utility vehicles get less than 14 miles per gallon?
- c.) What percent of the small cars get more than 29 miles per gallon?

6.)

Ms. Andrews made the line plots below to compare the quiz scores for her first-period math class and her second-period math class. She gave the same quiz to each class.



What conclusion can Ms. Andrews make about the performance of her first- and second-period classes?

- A The first-period class had a higher median score than the second-period class.
- B The second-period class scores had a higher mean than the first-period class scores.
- C The first-period class scores had a greater range than the second-period class scores.

7.) The data set 5, 6, 7, 8, 9, 9, 9, 10, 12, 14, 17, 17, 18, 19, 19 represents the number of hours spent on the Internet in a week by students in a mathematics class. Which box-and-whisker plot represents this data?

