Name ..... Date ..... Class .....

Labsheet 4ACE

Exercises 10–12

Jimena likes to hike in the hills. She drives to a new place almost every weekend. The distances Jimena traveled each weekend for the past 30 weekends are listed below.

Weekend Travel

33, 10, 95, 71, 4, 38, 196, 85, 19, 4,
209, 101, 63, 10, 4, 27, 128, 32, 11, 213,
95, 10, 77, 200, 27, 62, 73, 11, 100, 16

10. a. Draw a box-and-whisker plot to display the data.

b. Why is the left-hand whisker of the box plot (between the minimum value and Quartile 1) so short?

c. Why is the right-hand whisker of the box plot (between Quartile 3 and the maximum value) so long?

d. What information does the median give about the distances Jimena traveled?

e. Find the mean of the distances. Compare the mean and the median distances. What does your comparison tell you about the distribution?

Labsheet 4ACE

Exercises 10–12

11. a. Draw a histogram showing the distribution of the data. Use an interval size of 20 miles.

b. How many weekends did Jimena drive at least 20 but less than 40 miles? Explain how you can use the histogram to find your answer.

c. How many weekends did Jimena drive 100 miles or more? Explain how you can use the histogram to find your answer.

d. Use the median you found in Exercise 10. In what interval of the histogram does the median fall? How is this possible?

12. Consider the box plot you made in Exercise 10 and the histogram you made in Exercise 11.

a. Compare the shape of the histogram to the shape of the box plot.

b. How does the height of the first bar in the histogram relate to the length of the left-hand whisker in the box plot?

c. How does the histogram help you understand the length of the right-hand whisker in the box plot?