Chapter 11 Review

Find the *mean*, *median*, *mode*, and *range*. State if *central tendencies* were found. (11.1 and 11.4)

1. Length, in inches, of different boxes are as follow: 46, 48, 50, 40, 42, 34, 62, 61, 43, 56, 36, 44, 40, 44, 40, 50. Draw also a bar graph to show the data.
2. Weight, in ounces, of rock samples in Ms. Llevada's class: 70, 62, 57, 64, 63, 55, 82, 66, 52, 77, 72, 64, 67, 68, 62, 65, 64. Draw also a histogram to exhibit the data.
3. Length, in meters, of ships anchored in Boston harbor: 220, 245, 223, 208, 200, 240, 235, 238, 222. Draw also a stem-and-leaf plot.
4. Winter temperatures for two weeks in Havana: 65, 67, 68, 64, 66, 70, 68, 69, 71, 68, 69, 69, 70, 68. Draw also a dot plot for the data.
5. Weight, in grams, of Florida butterflies: 0.09, 0.1, 0.08, 0.11, 0.11, 0.08, 0.1, 0.08
6. Output, in gallons per minute, of a water pump: 211, 210, 212, 210, 215, 216, 215, 210, 215, 212.
7. Width, in inches, of cabinet doors: 25, 20, 22, 21, 23, 21, 20, 21, 25.
8. Speed, in miles per hour, of a hurricane: 98, 99, 101, 97, 102, 101, 99, 97, 99, 98, 101, 98.
9. Prices, in euros, of wine: 162, 165, 162, 163, 171, 160, 159, 163, 162, 163, 162, 158, 160, 164, 162, 162. Draw also a box plot and find the interquartile range and outliers, if any.
10. Height, in centimeters, of doors: 167, 168, 167, 166, 169, 170, 168, 167, 167, 169, 160, 166, 167, 168.
11. Rainfall, in mm, for Boston: 122, 125, 122, 120, 120, 123, 120, 124, 122, 122, 123, 122, 100, 113. Draw also a box plot and find the interquartile range and outliers, if any.
12. The income of the city of Coral Gables includes (in millions): $54 from property taxes, $19 from use charges, $15 from other taxes, $8 from permits, and $3 from recreational fees. Draw also a percent circle graph to show the income distribution.

Solve. (11.2)

13. Six people line up at an ATM machine, two women and four men. If they arrive at random, what is the probability that the first two in line are women?
14. A bag of marbles contains 18 blue, 17 yellow, and 19 orange marbles. What is the percent probability that you select two orange marbles in a row without looking? The first marble is not replaced.
15. Ten men and four women are selected to form a line at random. What is the percent probability that the first three in line are men?
16. What is the probability that two blue marbles are selected at random from a bag that contains 30 red marbles and 20 blue marbles? The first blue marble is returned to the bag.
17. Twelve ducks, seven brown and five black, land randomly on a pond. What is the compound probability that the brown ducks land one-two?
18. A group of seven students, three boys and four girls, line up for lunch randomly. What is the percent probability that two of the girls will be first and last in line?
19. What is the probability of rolling "six" two times in a row when throwing a pair of dice?

Solve. (11.3)

20. A student has 4 skirts and 9 blouses in her closet that she may combine to produce one outfit. How many ways can she combine all the skirts and all the blouses?
21. A man has 18 colors and needs to select two of the colors for the cover of a book, one for the text and one for the background. In how many different ways can the printer print the cover?
22. How many ways can the letters in the name PEDRO be arranged?
23. In a group of 12 students, the teacher wants to make groups of three for a project. How many different groups of three can she make?
24. In a group of 18 students, how many different groups of 6 are possible for a project?
25. A car dealership offers in its convertible line seven different exterior colors, four different tops, and nine different interior colors. How many different ways can a customer combine the options?
26. A chef has seven different salads: lettuce, carrot, potato, crab, watercress, cole slaw, and spinach. How many ways can he arrange them in a straight line on a serving table?
27. A 10-member band wants to pair musicians for different musical sets. How many different pairs could be formed?