Chapter 11 Test

In 1 to 6, find the *mean*, *median*, *mode*, and *range*. State if *central tendencies* were found. (11.1 and 11.4)

1. Depth, in millimeters, of different liquids: 146, 148, 150, 140, 142, 156, 136, 144, 140, 144, 140, 150. Draw also a bar graph to show the data.

2. Weight, in grams, of dirt samples in science class: 570, 562, 557, 564, 563, 564, 567, 568, 562, 564. Draw also a histogram to exhibit the data.

3. Length, in inches, of model cars: 20, 55, 60, 75, 50, 40, 88, 80, 42, 55, 75, 50, 40, 55, 25, 55. Draw also a dot plot for the data.

4. Summer temperatures in Miami: 85, 87, 88, 84, 86, 80, 88, 89, 81, 88, 89, 89, 80, 88, 90, 88, 92. Draw also a box plot and find the interquartile range and outliers, if any.

5. Weight, in grams, of gold samples: 0.19, 0.2, 0.18, 0.21, 0.21, 0.28, 0.2, 0.28, 0.19, 0.2, 0.19. Draw also stem-and-leaf graph.

6. Leak, in milliliters per day, of gas tank: 0.22, 0.21, 0.23, 0.21, 0.24, 0.22, 0.21, 0.21, 0.23, 0.2. Draw also a box plot and find the interquartile range and outliers, if any.

7. The expenses for the prom at ACE Academy are as follows: $2,100 hall rental, $4,200 food, $500 Disc-Jockey, $300 flowers, $700 photographer, and $300 decorations. Draw a fraction circle graph to show the expense distribution.

Solve. (11.2)

8. Ten vehicles line up at the gas pump, four cars and six trucks. If they arrive at random, what is the probability that the first three in line are cars?

9. A bag of marbles contains 28 blue, 27 yellow, and 29 orange marbles. What is the percent probability that you select three orange marbles in a row without looking? The marbles are not replaced.

10. Seven cows and five goats are selected at random to cross a river. What is the percent probability that the first two in line are cows?

11. What is the probability that four blue marbles are selected at random from a bag that contains 60 red marbles and 40 blue marbles? The blue marbles are always returned to the bag.

12. Four poisonous snakes and six harmless snakes slither into a room. What is the probability of getting bitten by two different poisonous snakes?

Solve. (11.3)

13. In her closet, a student has 7 skirts and 12 blouses that she may combine to produce one outfit. How many ways can she combine all the skirts and all the blouses?

14. A man has 28 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?

15. How many ways can the letters in the word IMPOUND be arranged?

16. In a group of 15 students, the teacher wants to make groups of four for a project. How many different groups of four are possible?

17. In a group of 21 students, how many different groups of 5 could be made for a project?

18. A car dealership offers in its convertible line nine different exterior colors, three different tops, and ten different interior colors. How many different ways can a customer combine the options?