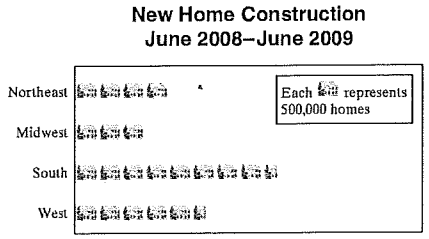
Chapter 7 Review

(7.1) *The following pictograph shows the number of new homes constructed from June 2008 to June 2009, by region. Use this graph to answer Exercises 1 through 6.*



Source: U.S. Census Bureau

1. How many new homes were constructed in the Midwest during the given year?

2. How many new homes were constructed in the Northeast during the given year?

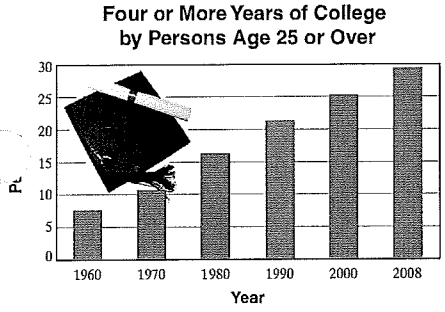
3. Which region had the most new homes constructed?

4. Which region had the fewest new homes constructed?

5. Which region(s) had 3,000,000 or more new homes constructed?

6. Which region(s) had fewer than 3,000,000 new homes constructed?

The following bar graph shows the percent of persons age 25 or over who completed four or more years of college. Use this graph to answer Exercises 7 through 10.



Source: U.S. Census Bureau

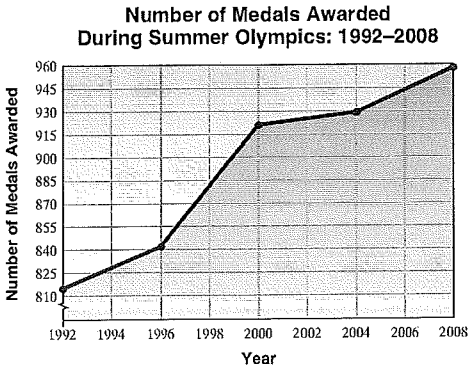
7. Approximate the percent of persons who had completed four or more years of college by 1970.

8. What year shown had the greatest percent of persons completing four or more years of college?

9. What years shown had 20% or more of persons completing four or more years of college?

10. Describe any patterns you notice in this graph.

The following line graph shows the total number of Olympic medals awarded during the Summer Olympics since 1992. Use this graph to answer Exercises 11 through 16.



Source: International Olympic Committee

11. Approximate the number of medals awarded during the Summer Olympics of 2008.

12. Approximate the number of medals awarded during the Summer Olympics of 2000.

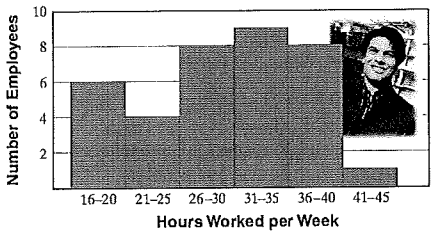
13. Approximate the number of medals awarded during the Summer Olympics of 2004.

14. Approximate the number of medals awarded during the Summer Olympics of 1992.

15. How many more medals were awarded at the Summer Olympics of 1996 than at the Summer Olympics of 1992?

16. How many more medals were awarded at the Summer Olympics of 2008 than at the Summer Olympics of 1992?

The following histogram shows the hours worked per week by the employees of Southern Star Furniture. Use this histogram to answer Exercises 17 through 20.



17. How many employees work 41–45 hours per week?

18. How many employees work 21–25 hours per week?

19. How many employees work 30 hours or less per week?

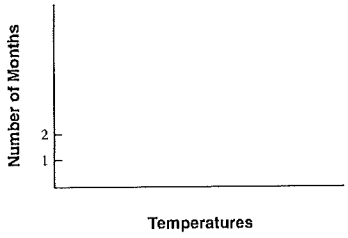
20. How many employees work 36 hours or more per week?

Following is a list of monthly record high temperatures for New Orleans, Louisiana. Use this list to complete the frequency distribution table below.

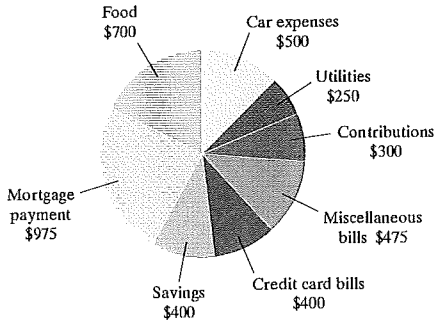
83	96	101	92
85	100	92	102
89	101	87	84

	Class Intervals (Temperatures)	Tally	Class Frequency (Number of Months)
21.	80°–89°		
22.	90°–99°		
23.	100°–109°		

24. Use the table from Exercises 21–23 to draw a histogram.



(7.2) *The following circle graph shows a family's $4000 monthly budget. Use this graph to answer Exercises 25 through 30. Write all ratios as fractions in simplest form.*



25. What is the largest budget item?

26. What is the smallest budget item?

27. How much money is budgeted for the mortgage payment and utilities?

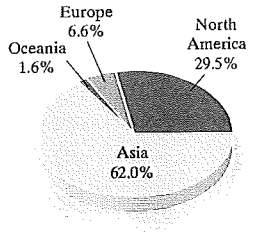
28. How much money is budgeted for savings and contributions?

29. Find the ratio of the mortage payment to the total monthly budget.

30. Find the ratio of food to the total monthly budget.

In 2008, there were approximately 61 buildings over 1000 feet tall in the world. The following circle graph shows the percent of buildings over 1000 feet tall in the world by continent in 2008. Use this graph to determine the number of tall buildings on each continent in Exercises 31 through 34. Round each answer to the nearest whole. (Note: The percents in the circle do not have a sum of 100% because of rounding.)

Percent of Tall Buildings Over 1000 Feet by Continent



Source: Council on Tall Buildings and Urban Habitats

31. How many tall buildings were located in Asia?

32. How many tall buildings were located in North America?

33. How many tall buildings were located in Oceania?

34. How many tall buildings were located in Europe?

(7.3) *Find the mean, median, and any mode(s) for each list of numbers. If necessary, round to the nearest tenth.*

35. 13, 23, 33, 14, 6

36. 45, 86, 21, 60, 86, 64, 45

37. 14,000, 20,000, 12,000, 20,000, 36,000, 45,000

38. 560, 620, 123, 400, 410, 300, 400, 780, 430, 450

For Exercises 39 and 40, the grades are given for a student for a particular semester. Find each grade point average. If necessary, round the grade point average to the nearest hundredth.

39.

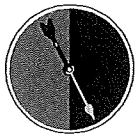
Grade	Credit Hours
A	3
A	3
C	2
B	3
C	1

40.

Grade	Credit Hours
B	3
B	4
C	2
D	2
B	3

(7.4) *Draw a tree diagram for each experiment. Then use the diagram to determine the number of outcomes.*

Spinner 1


Spinner 2

41. Tossing a coin and then spinning Spinner 1

42. Spinning Spinner 2 and then tossing a coin

43. Spinning Spinner 1 twice

44. Spinning Spinner 2 twice

45. Spinning Spinner 1 and then Spinner 2

Find the probability of each event.

46. Rolling a 4 on a die

47. Rolling a 3 on a die

48. Spinning a 4 on the spinner

49. Spinning a 3 on the spinner

50. Spinning either a 1, 3, or 5 on the spinner

51. Spinning either a 2 or a 4 on the spinner

52. Rolling an even number on a die

53. Rolling a number greater than 3 on a die

Mixed Review

Find the mean, median, and any mode(s) for each list of numbers. If needed, round answers to two decimal places.

54. 73, 82, 95, 68, 54

55. 25, 27, 32, 98, 62

56. 750, 500, 427, 322, 500, 225

57. 952, 327, 566, 814, 327, 729

Given a bag containing 2 red marbles, 2 blue marbles, 3 yellow marbles, and 1 green marble, find the following:

58. The probability of choosing a blue marble from the bag

59. The probability of choosing a yellow marble from the bag

60. The probability of choosing a red marble from the bag

61. The probability of choosing a green marble from the bag