

Chapter 6 Review Exercise Answers

1. ratios 2. 25 and 24 3. cross multiplication 4. multiplication
5. fraction or decimal 6. 100% 7. False
8. True 9. False 10. True
11. $\frac{12 \text{ cookies}}{1 \text{ box}}$ 12. $\frac{45 \text{ cents}}{1 \text{ donut}}$ 13. $\frac{3 \text{ quarts}}{8 \text{ children}}$ 14. $\frac{\$7.00}{10 \text{ cards}}$
15. 25 players per game 16. \$85 per week
17. 120 passengers for every 5 cars 18. 80 miles for every 3 gallons
19. $\frac{72 \text{ dollars}}{9 \text{ shares}} = \frac{8 \text{ dollars}}{1 \text{ share}}$ 20. $\frac{18 \text{ minutes}}{45 \text{ minutes}} = \frac{2}{5}$
21. $\frac{2.4 \text{ acres}}{3 \text{ acres}} = \frac{4}{5}$ 22. $\frac{0.6 \text{ calories}}{1.5 \text{ grams}} = \frac{2 \text{ calories}}{5 \text{ grams}}$
23. $\frac{12 \text{ pounds}}{15 \text{ pounds}} = \frac{4}{5}$ 24. $\frac{20 \text{ inches}}{32 \text{ inches}} = \frac{5}{8}$
25. a) $\$120 : \$90; \frac{\$120}{\$90} = \frac{4}{3}$ 26. a) $\$180 : \$120; \frac{\$180}{\$120} = \frac{3}{2}$
- b) $\$120 : \$210; \frac{\$120}{\$210} = \frac{4}{7}$ b) $\$180 : \$300; \frac{\$180}{\$300} = \frac{3}{5}$
- c) $\$90 : \$210; \frac{\$90}{\$210} = \frac{3}{7}$ c) $\$120 : \$300; \frac{\$120}{\$300} = \frac{2}{5}$
27. $60 = 60$; yes 28. $400 \neq 450$; no 29. $18 \neq 20$; no 30. $15 = 15$; yes
31. $\frac{65 \text{ dollars}}{1 \text{ day}}$; \$65 per day 32. $\frac{15 \text{ customers}}{2 \text{ hours}}$; 15 customers every 2 hours
33. $\frac{1 \text{ hit}}{3 \text{ times at bat}}$; 1 hit every 3 times at bat 34. $\frac{3 \text{ repetitions}}{5 \text{ minutes}}$; 3 repetitions every 5 minutes

35. $\frac{4 \text{ golf balls}}{1 \text{ player}}$; 4 golf balls per player

36. $\frac{11.4 \text{ students}}{1 \text{ tutor}}$; 11.4 students per tutor

37. $\frac{11.8 \text{ phone calls}}{1 \text{ day}}$; 11.8 phone calls per day

38. $\frac{18.5 \text{ miles}}{1 \text{ gallon}}$; 18.5 miles per gallon

39. $\frac{\$1,350}{6 \text{ residents}} = \frac{\$225}{1 \text{ resident}}$; \$225 per resident.

40. $\frac{339 \text{ points}}{15 \text{ games}} = \frac{22.6 \text{ points}}{1 \text{ game}}$; 22.6 points per game.

41. $\frac{\$405}{18 \text{ trees}} = \frac{\$22.5}{1 \text{ tree}}$; \$22.5 per tree.

42. $\frac{\$114}{25 \text{ chairs}} = \frac{\$4.56}{1 \text{ chair}}$; \$4.56 per chair.

43. Redd's: \$0.12 per ounce; Green's: \$0.15 per ounce. Redd's is the better buy.

44. AlwaysReady: \$0.81 per battery; LightShine: \$0.75 per battery. LightShine is the better buy.

45. $n = 21$

46. $n = 15$

47. $n = 72$

48. $n = 35$

49. Let n = number of miles

	First set	Second set
Gallons	12	16
Miles	246	n

Kjell's car can travel 328 miles on 16 gallons of gas.

50. Let n = amount to be charged

	First set	Second set
Dollars	6	n
Square feet	4	82

Lonnie will charge \$123 to paint 82 square feet of wall.

51. Let n = amount of money raised

First set	Second set
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52. Let n = the number of seconds

First set	Second set
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Dollars	13.50	n
Laps	3	32

Karrie raised \$144.

Pages	6	22
Seconds	15	n

It will take 55 seconds to print 22 pages.

53. $\frac{1}{5}$ of the homes in Westside Estates are ranch style.

54. $\frac{3}{20}$ of all fruit sold in Bryson's grocery store is organically grown.

55. $\frac{2}{25}$ of all U.S. residents live in Texas.

56. $\frac{1}{40}$ of the medals awarded at the 2004 Summer Olympics went to athletes from Ukraine.

57. 0.47

58. 0.03

59. 0.091

60. 0.006

61. 26%

62. 2%

63. 17.5%

64. 70%

65. 106%

66. 0.5%

67. 15% of the Sri Lankan population is Hindu.

68. 64% of the shoppers at Lucia's Floristas pay with a credit card.

69. 87.5% of the students in Ms. Skiba's art class received a passing grade.

70. 28.6% of all U.S. car sales are small cars.

71. Let a = the number of tenors

	Percent	Singers
Tenors	15	a
All singers	100	40

6 of the singers are tenors.

72. Let a = the number of engineers with at least 10 years at Hudson Dynamic

	Percent	Engineers
At least ten years	37.5	a
All engineers	100	32

12 engineers have been at Hudson Dynamic for at least ten years.

73. Let b = the number of dinner customers

Percent	Customers
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74. Let b = the total number of teachers

Percent	Teachers
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Order a salad	65	91
All customers	100	b

There were 140 dinner customers in all.

Doctorate degree	2.5	8
All teachers	100	b

There are 320 teachers in the district.

75. Let p = the unknown percentage

	Percent	Days
Rain	p	18
All days	100	30

It rained 60% of the days in April.

76. Let p = the unknown percentage

	Percent	Oscars
<i>Chicago</i>	p	6
All Oscars	100	18

Chicago won about 33.3% of the Oscars.

77. 38

78. 49

79. 10

80. 6

81. 25% of 76 is 19.

82. 60% of 85 is 51.

83. 28% of 125 is 35.

84. 55% of 160 is 88.

85. 75% of 52 is 39.

86. 37.5% of 120 is 45.

87. 4,000 students attend Cuyama College.

88. 15% of the National League players hit at least thirty home runs in 2004.

89. DuJuan will pay \$86.00 at the cash register.

90. Sandra earned \$6,500 commission on the sale of that house.

91. The new price of the box of bulbs is \$4.90.

92. Torraye's free throw success was 62.5%.

93. This savings was 25% of the retail price.

94. a) The cost of the meal was \$36.00.

b) The sales tax on the cost of the meal was \$2.88.

c) The tip was \$9.60.

d) Connie paid \$48.48 for dinner that night.

95. The Chamber's membership increased by 25%.

96. Corrine's home increased 12.5% in value.

- 97.** The water level decreased 37.5% during that week.
- 98.** The number of students in Dr. Ortega's statistics class decreased 26.7%.