

Study Guide and Review - Chapter 2

Determine whether each pair of ratios are equivalent ratios. Write *yes* or *no*.

55. $\frac{27}{45}, \frac{3}{5}$

56. $\frac{18}{32}, \frac{3}{4}$

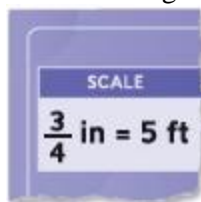
Solve each proportion. If necessary, round to the nearest hundredth.

57. $\frac{4}{9} = \frac{a}{45}$

58. $\frac{3}{8} = \frac{21}{t}$

59. $\frac{9}{12} = \frac{g}{16}$

60. **CONSTRUCTION** A new gym is being built at the Greenfield Middle School. The length of the gym as shown on the builder's blueprints is 12 inches. Find the actual length of the new gym.



State whether each percent of change is a percent of *increase* or a percent of *decrease*. Then find the percent of change. Round to the nearest whole percent.

61. original: 40, new: 50

62. original: 36, new: 24

63. original: \$72, new: \$60

Find the total price of each item.

64. boots: \$64, tax: 7%

65. GPS: \$98, tax: 6.5%

66. hockey skates: \$199, tax: 5.25%

Find the discounted price of each item.

67. tablet: \$275, discount: 20%

68. jacket: \$129, discount: 15%

69. backpack: \$45, discount: 25%

70. **ATTENDANCE** An amusement park recorded attendance of 825,000 one year. The next year, the attendance increased to 975,000. Determine the percent of increase in attendance.

Solve each equation or formula for the variable indicated.

71. $3x + 2y = 9$, for y

72. $P = 2\ell + 2w$, for ℓ

73. $-5m + 9n = 15$, for m

74. $14w + 15x = y - 21w$, for w

75. $m = \frac{2}{5}y + n$, for y

76. $7d - 3c = f + 2d$, for d

77. **GEOMETRY** The formula for the area of a trapezoid is $A = \frac{1}{2}h(a+b)$, where h represents the height and a and b represent the lengths of the bases. Solve for h .

78. **CANDY** Michael is mixing two types of candy for a party. The chocolate pieces cost \$0.55 per ounce, and the hard candy costs \$0.35 per ounce. Michael purchases 20 ounces of the chocolate pieces, and the total cost of his candy was \$18. How many ounces of hard candy did he purchase?

79. **TRAVEL** A car travels 100 miles east in 2 hours and 30 miles north in half an hour. What is the average speed of the car?

80. **FINANCIAL LITERACY** AA candle supply store sells votive wax and low-shrink wax. How many pounds of low shrink wax should be mixed with 8 pounds of votive wax to obtain a blend that sells for \$1.50 a pound?

