D. Word Problems:

If an object moves at a constant rate of speed r, the distance d it travels in time t is given by the formula $d = rt$.

example: If $t = 5$ and $d = 50$, find r:
Substitute the given values in $d = rt$ and solve: $50 = r \bullet 5$, giving $r = 10$.

Problems 71-72: In $d = rt$, substitute, then solve for the variable:

71. $t = 5$, $r = 50$; $d =$

72. $d = 50$, $r = 4$; $t =$

73. On a 40 mile hike, a strong walker goes 3 miles per hour. How much time will the person hike? Write an equation, then solve it.

74. "Product"

75. "Quotient"

76. "Difference"

77. "Sum"

<p style="text-align:center; color:red;">Answers</p>

71. $d = 50 \bullet 5$; $d = 250$

72. $50 = 4t$; $t = \frac{25}{2}$

73. $40 = 3t$; $t = \frac{40}{3}$ hours

74. Multiply

75. Divide

76. Subtract

77. Add

78. The sum of two numbers is 43. One of the two numbers is 17. What is the other?

79. Write an equation which says that the sum of a number n and 17 is 43.

80. Write an equation which says the amount of simple interest A equals the product of the invested principle P, the rate of interest r, and the time t.

81. Use the equation of problem 80: $P = \$200$, $r = 7\%$ and $t = 5$ years. Find the amount of interest A.

Problems 82-83: In a rectangle which has two sides of length a and two sides of length b, the perimeter P is found by adding all the side lengths, or $P = 2a + 2b$.

82. If $a = 5$ and $b = 8$, find P.

83. If $a = 7$ and $P = 40$, find b.

Answers

78. 26
79. $n + 17 = 43$
80. $A = Prt$
81. $A = \$70$
82. $P = 26$
83. $b = 13$

Problems 84-85: The difference of two numbers x and 12 is 5.

84. If x is the *larger*, an equation, which says this same thing could be $x - 12 = 5$. Write an equation if x is the *smaller* of the two numbers x and 12.

85. Find the two possible values of x by solving each equation in problem 84.

Problems 86-87: Write an equation, which says:

86. n is 4 more than 3.

87. 4 less than x is 3.

88. Solve the two equations you wrote for problems 86 and 87.

Answers

84. $12 - x = 5$
85. $x = 17 \text{ or } 7$
86. $n = 4 + 3$
87. $x - 4 = 3$
88. $n = 7; \ x = 7$