NAME _____ CLASS _____ DATE _____

Practice

7.6 Classic Puzzles in Two Variables

1. The tens digit of a 2-digit number is twice the units digit. The sum of the digits is 12. Find the original number. _____

2. Olga has 5 times as many dimes as nickels. If she has $3.30, how many of each coin does she have? _____

3. Milk that is 4% butterfat is mixed with milk that is 1% butterfat to obtain 18 gallons of milk that is 2% butterfat. How many gallons of each type of milk are needed? _____

4. A banker invested a portion of $10,000 at 5% interest per year and the remainder at 4% interest per year. If the banker received $470 in interest after 1 year, how much was invested at each rate? _____

5. The sum of Nora's age and her grandmother's age is 71. Four times Nora's age is 6 less than her grandmother's age. Find their ages. _____

6. Sailing with the current, a boat takes 3 hours to travel 48 miles. The return trip, against the current, takes 4 hours. Find the average speed of the boat for the entire trip and the speed of the current. _____

7. A coin bank contains nickels, dimes, and quarters totaling $5.45. If there are twice as many quarters as dimes and 11 more nickels than quarters, how many of each coin are in the bank? _____

8. Find the two-digit number whose tens digit is 3 less than the units digit. The original number is 6 more than 4 times the sum of the digits. _____

9. A daughter is 28 years younger than her father. In 5 years, the father will be 3 times as old as his daughter. How old is each now? _____

10. A chemist has a solution that is 20% peroxide and another solution that is 70% peroxide. She wishes to make 100 L of a solution that is 35% peroxide. How much of each solution should she use?

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