1. The sum of the digits of a two-digit number is 11. The number is 13 times the units digit. Find the number.

2. Three times the tens digit of a two-digit number, increased by the units digit, is 16. If the digits are reversed, the new number is 1 less than twice the original number. Find the original number.

3. Paul is 3 times as old as Cathy. In 8 years, he will be twice as old as she will be. How old is each now?

4. Elaine is 15 years younger than Al. Ten years ago, Al was 4 times as old as Elaine was then. How old is each now?

5. Jane has a collection of nickels and quarters worth $3.05. She has 7 more nickels than quarters. How many coins of each type does she have?

6. A coffee wholesaler mixes Colombian beans selling at $1.20/lb with Venezuelan beans selling at $1.60/lb. He wants a mixture of 90 pounds to sell at $1.24/lb. How many pounds of each should he use?

7. A 20% alcohol solution is mixed with a 30% alcohol solution to obtain 25 gallons of a 24% solution. How many gallons of each are needed?

8. The distance between Chicago and New York is 735 mi. A plane left Chicago flying with the wind and landed in New York in 1 h 45 min. Then the plane left New York flying against the same wind, and landed in Chicago after 2 h. Find the rate of the plane in calm air and the rate of the wind.

9. The units digit of a two-digit number is 4 less than 6 times the tens digit. If the digits are reversed, the new number is 2 less than 3 times the original number. Find the original number.

10. David is 4 years younger than Joan. Six years ago, Joan was three times as old as David was then. How old is each now?

11. John has a collection of dimes and quarters worth $4.50. He has 4 more quarters than dimes. How many coins of each type does he have?

12. A 36% salt solution is mixed with a 42% salt solution to obtain 21 gallons of a 40% solution. How many gallons of each are needed?

13. A car left Dodge City traveling at 50 mi/h. One hour 30 min later, another car left Dodge City using the same highway traveling at 60 mi/h. in how many hours after the slow car starts will the two cars meet?