A.CED.A.3: Modeling Linear Systems 4

1   Divide 46 into two parts such that the sum of the quotients obtained by dividing one part by 7 and the other part by 3 may be equal to 10.

2   One half the sum of two numbers is equal to one and one half times their difference. Twice the larger number exceeds three times the smaller by 12. Find the numbers.

3   The sum of two numbers is 20 and one half the larger is equal to three fourths the smaller. Find the numbers.

4   The age of the elder of two boys is twice that of the younger. Three years ago it was three times that of the younger. Find the age of each.

5   A man has two kinds of money, dimes and half dimes. If he is offered $1.35 for 20 coins, how many of each kind must he give?

6   A man had a surplus of $5000 after the purchase of a farm at $150 an acre. Had the rate been $180 an acre he would have needed $1000 more for the purchase. How many acres were there in the farm?

7   If a certain number is increased by the sum of its digits the sum is 21. If the number is diminished by twice the sum of its digits the result is 3. Find the number.

8   A number expressed by two digits is equal to six times the sum of its digits plus 2. If the order is reversed the resulting number will be 9 less than the original. Find the number.

9   In a number of two digits the first digit is twice the second, and if 18 be subtracted from the number the order of the digits will be inverted. Find the number.

10   A number is expressed by two digits whose sum is 12. If the digits are interchanged the resulting number is less than the original number by 36. Find the number.

11   A number is composed of two digits whose sum is equal to four times the tens digit. If the digits are interchanged the resulting number exceeds the original number by 36. Find the number.

12   The digits in the units place of a certain number of two figures is 7 less than the digit in the tens place. If the order of the digits is reversed, the resulting number will be $\frac{2}{9}$ the original number. Find the number.

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Answer Section

 1 ANS:
    18 and 28

    REF: 039009al
 2 ANS:
    12 and 24

    REF: 039307al
 3 ANS:
    8 and 12

    REF: 069506al
 4 ANS:
    12 and 6

    REF: 060007al
 5 ANS:
    7 dimes and 13 half dimes

    REF: 039107al
 6 ANS:
    200

    REF: 119405al
 7 ANS:
    15

    REF: 069514al
 8 ANS:
    32

    REF: 119314al
 9 ANS:
    42

    REF: 089612al
10 ANS:
    84

    REF: 019807al
11 ANS:
    26

    REF: 069907al

12 ANS:
81

REF: 090512al