

# Basic Algebra Word Problems(4)

1. To four times a number  $x$  add 23 and obtain 95. What is the number?
2. From three times a number  $x$  take 25 and obtain 47. What is the number?
3. John and Mary gathered 23 quarts of nuts. John gathered 2 quarts more than twice as many as Mary. How many quarts did each gather?
4. To the double of a number  $x$  add 17 and obtain as a result 147. What is the number?
5. Charles and Henry together have 49 marbles, and Charles has twice as many as Henry and 4 more. How many marbles has each?
6. In an orchard containing 33 trees the number of pear trees is 5 more than three times the number of apple trees. How many are there of each kind?
7. Find a number which being multiplied by 5 and having 14 added to the product will equal 69.
8. I bought some tea and coffee for \$10.39. If I paid for the tea 61 cents more than five times as much as for the coffee, how much did I pay for each?
9. Two houses together contain 48 rooms. If the second house has 3 more than twice as many rooms as the first, how many rooms has each house?
10. Divide the number 23 into three parts, such that the second is 1 more than the first, and the third is twice the second.
11. Divide the number 137 into three parts, such that the second shall be 3 more than the first, and the third five times the second.
12. Mr. Ames builds three houses. The first cost \$2000 more than the second and the third twice as much as the first. If they all together cost \$18,000, what was the cost of each house?
13. An artist, who had painted three pictures, charged \$18 more for the second than the first, and three times as much for the third as the second. If he received \$322 for the three, what was the price of each picture?
14. Three men, A, B, and C, invest \$47,000 in business. B puts in \$500 more than twice as much as A, and C puts in three times as much as B. How many dollars does each put into the business?
15. In three lots of land there are 80,750 feet. The second lot contains 250 feet more than three times as much as the first lot, and the third lot contains twice as much as the second. What is the size of each lot?
16. A man leaves by his will \$225,000 to be divided as follows: his son to receive \$10,000 less than twice as much as the daughter, and the widow four times as much as the son. What was the share of each?
17. A man and his two sons picked 25 quarts of berries. The older son picked 5 quarts less than three times as many as the younger son, and the father picked twice as many as the older son. How many quarts did each pick?
18. Three brothers have 574 stamps. John has 15 less than Henry, and Thomas has 4 more than John. How many has each?

## Example.

The sum of two numbers is 25, and the larger is 3 less than three times the smaller. What are the numbers?

## Solution

Let  $x$  = smaller number,

$3x + 3$  = larger number.

$$x + 3x - 3 = 25$$

$$4x - 3 = 25$$

$$4x = 28$$

$$x = 7$$

$$3x - 3 = 18$$

**The numbers are 7 and 18.**

# Basic Algebra Word Problems(4) - Solutions

1. To four times a number  $x$  add 23 and obtain 95. What is the number? **18**
2. From three times a number  $x$  take 25 and obtain 47. What is the number? **24**
3. John and Mary gathered 23 quarts of nuts. John gathered 2 quarts more than twice as many as Mary. How many quarts did each gather? **John: 16 quarts; Mary: 7 quarts**
4. To the double of a number  $x$  add 17 and obtain as a result 147. What is the number? **65**
5. Charles and Henry together have 49 marbles, and Charles has twice as many as Henry and 4 more. How many marbles has each? **Charles: 34; Henry: 15**
6. In an orchard containing 33 trees the number of pear trees is 5 more than three times the number of apple trees. How many are there of each kind? **26 pears; 7 apples**
7. Find a number which being multiplied by 5 and having 14 added to the product will equal 69. **11**
8. I bought some tea and coffee for \$10.39. If I paid for the tea 61 cents more than five times as much as for the coffee, how much did I pay for each? **Tea: \$8.76; Coffee: \$1.63**
9. Two houses together contain 48 rooms. If the second house has 3 more than twice as many rooms as the first, how many rooms has each house? **15; 33 rooms**
10. Divide the number 23 into three parts, such that the second is 1 more than the first, and the third is twice the second. **5; 6; 12**
11. Divide the number 137 into three parts, such that the second shall be 3 more than the first, and the third five times the second. **17; 20; 100**
12. Mr. Ames builds three houses. The first cost \$2000 more than the second and the third twice as much as the first. If they all together cost \$18,000, what was the cost of each house? **\$5000; \$3000; \$10,000**
13. An artist, who had painted three pictures, charged \$18 more for the second than the first, and three times as much for the third as the second. If he received \$322 for the three, what was the price of each picture? **\$50; \$68; \$204**
14. Three men, A, B, and C, invest \$47,000 in business. B puts in \$500 more than twice as much as A, and C puts in three times as much as B. How many dollars does each put into the business? **A: \$5000; B: \$10,500; C: \$31,500**
15. In three lots of land there are 80,750 feet. The second lot contains 250 feet more than three times as much as the first lot, and the third lot contains twice as much as the second. What is the size of each lot? **8000 ft; 24,500 ft; 48,500 ft**
16. A man leaves by his will \$225,000 to be divided as follows: his son to receive \$10,000 less than twice as much as the daughter, and the widow four times as much as the son. What was the share of each? **Widow: \$160,000; Daughter: \$25,000; Son: \$40,000**
17. A man and his two sons picked 25 quarts of berries. The older son picked 5 quarts less than three times as many as the younger son, and the father picked twice as many as the older son. How many quarts did each pick? **Father: 14 quarts; Older son: 7 quarts; Younger son: 4 quarts**
18. Three brothers have 574 stamps. John has 15 less than Henry, and Thomas has 4 more than John. How many has each? **Henry: 200 stamps; John: 185 stamps; Thomas: 189 stamps**