

LESSON

6-3

Writing Two-Step Equations***Practice and Problem Solving: A/B***

Model each two-step operation by drawing algebra tiles.

1. $3m + 5 = 8$

2. $-2x - 3 = 5$.

Write an equation to represent each problem.

3. The sum of fifteen and six times a number t is eighty-one. What is the number?
- _____

4. An electrician charges \$40 to come to your house. She also charges \$55 for each hour that she works. The electrician charges you a total of \$190. How many hours does the electrician work at your house? Use h for the number of hours.
- _____

5. A taxi charges \$1.75 plus a fee of \$0.75 for each mile traveled. The total cost of a ride, without a tip, is \$4.75. How many miles is the trip? Use m for the number of miles traveled.
- _____

LESSON
6-3**Writing Two-Step Equations*****Practice and Problem Solving: C***

Write a two-step equation for each word problem.

1. The sum of a number p and seven is divided by twelve. The result is three. What is the number?

2. Sixteen is divided by the sum of a number q and 1. The result is four. What is the number?

3. A number s is subtracted from seven. When the result is divided by three, the quotient is two. What is the number?

Write a two-step equation to represent each problem.

4. Twelve and three tenths more than five and thirteen thousandths of a number d is equal to fifteen and three hundred two thousandths. What is the value of d ?

5. When the sum of an unknown number z and twenty-two is divided by the same unknown number, the quotient is twelve. What is the unknown number?

6. A home repair crew charges seventy-five dollars per day plus two hundred fifty-five dollars for each hour the crew works. One day the crew works c hours and charges a total amount of one thousand, six hundred five dollars. How many hours does the crew work?

LESSON
6-3**Writing Two-Step Equations****Practice and Problem Solving: D**

Model each two-step equation by drawing algebra tiles.
The first one is done for you.

1. $2p + 3 = 7$



2. $3t + 10 = 16$

3. $-q - 3 = 7$

Write an equation for each word problem. The first one is done for you.

4. The sum of three times a number
- d
- and 5 is 17. What is the number?

$3d + 5 = 17$

5. As a membership fee, a health club charges a one-time amount of \$40 and charges \$25 for each month. The total fee after
- m
- months is \$240. What is the value of
- m
- ?

6. A runner warms up for ten minutes and then takes seven minutes to run each mile. The total time after
- r
- miles is 45 minutes. How many miles are run?

LESSON
6-3**Writing Two-Step Equations****Reteach**

Many real-world problems look like this:

$$\text{one-time amount} + \text{number} \times \text{variable} = \text{total amount}$$

You can use this pattern to write an equation.

Example:

At the start of a month a customer spends \$3 for a reusable coffee cup. She pays \$2 each time she has the cup filled with coffee. At the end of the month she has paid \$53. How many cups of coffee did she get?

one-time amount: \$3

number \times variable: $2 \times c$ or $2c$, where c is the number of cups of coffee

total amount: \$53

The equation is: $3 + 2c = 53$.

Write an equation to represent each situation.

Each problem can be represented using the form:

$$\text{one-time amount} + \text{number} \times \text{variable} = \text{total amount}$$

1. The sum of twenty-one and five times a number f is 61.

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

one-time amount + number \times variable = total amount

2. Seventeen more than seven times a number j is 87.

$$\underline{\hspace{2cm}}$$

3. A customer's total cell phone bill this month is \$50.50. The company charges a monthly fee of \$18 plus five cents for each call. Use n to represent the number of calls.

$$\underline{\hspace{2cm}}$$

4. A tutor works with a group of students. The tutor charges \$40 plus \$30 for each student in the group. Today the tutor has s students and charges a total of \$220.

$$\underline{\hspace{2cm}}$$