Name _____ Date _____ Class_____

LESSON 6-3

Writing Two-Step Equations

Many real-world problems look like this:

one-time amount + number × variable = 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 × 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:

one-time amount + number × variable = total amount

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

_____		_____		_____
one-time amount	+	number × variable	=	total amount

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

_____

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.

_____

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.

_____

3. $j = 13.1$
4. $y = 12$
5. $w = -20$
6. $a = -6$

Reading Strategies

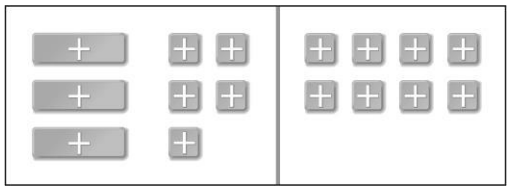
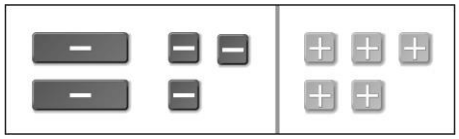
1. $8 \times \frac{p}{8} = -2 \times 8$; -16
2. $1.5 - 1.5 + q = -0.6 - 1.5$; -2.1
3. $\frac{-9.5a}{-9.5} = \frac{-38}{-9.5}$; 4
4. $14v = 269.50$; $\frac{14v}{14} = \frac{269.50}{14}$; $v = \$19.25$
5. $\frac{3}{4}g = 18$; $\frac{4}{3} \times \frac{3}{4}g = \frac{4}{3} \times 18$; $g = 24$ games

Success for English Learners

1. The "7.2" has to be written as "7.20" so it will have the same number of decimal places as "3.84."
2. $\frac{a}{-3}$ can be written as $-\frac{1}{3}a$, so $-\frac{1}{3}$ is a rational number coefficient.
3. $\frac{1}{4}x$ could be written as $\frac{x}{4}$ or as $0.25x$.

LESSON 6-3

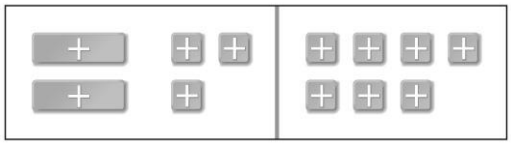
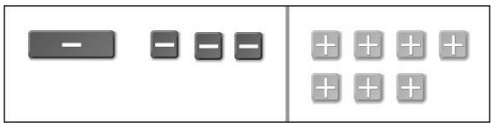
Practice and Problem Solving: A/B

1. 
2. 
3. $6t + 15 = 81$
4. $40 + 55h = 190$
5. $1.75 + 0.75m = 4.75$

Practice and Problem Solving: C

1. $\frac{p+7}{12} = 3$
2. $\frac{16}{q+1} = 4$
3. $\frac{7-s}{3} = 2$
4. $12.3 + 5.013d = 15.302$
5. $\frac{z+22}{z} = 12$
6. $75 + 255c = 1{,}605$

Practice and Problem Solving: D

1. 
2. 
3. 
4. $3d + 5 = 17$
5. $40 + 25m = 240$
6. $10 + 7r = 45$

Reteach

1. $21 + 5f = 61$
2. $7j + 17 = 87$
3. $18 + 0.05n = 50.50$
4. $40 + 30s = 220$

Reading Strategies

1. Equation: $50 - 5n = 15$

   Number of steps and description:

   Two steps: Multiply a number n by 5, and subtract the result from 50.
2. Equation: $m + 8 = 27$

   Number of steps and description:

   One step: Add 8 to a number m.
3. Equation: $4b + 3 = 23$

   Number of steps and description:

   Two steps: Multiply a number b by 4, then add 3.
4. Equation: $15f = 90$

   Number of steps and description:

   One step: Multiply a number f by 15.