

# EXERCISES

 For more practice, see *Extra Practice*.

## A Practice by Example

Draw algebra tiles to model each expression.

**Example 1**  
(page 69)


- $3x + 5$
- $c + 3$
- 8
- $z + 4$
- $4 + 2x$
- $a + 6$
- $c + c + c$
- $3m + 2$

**Example 2**  
(page 69)

Evaluate each expression for  $x = 8$ .

- $x + 12$
- $80 \div x$
- $2x - 3$
- $2(x - 3)$
- $10 + 2x$
- $12x$
- $42(x - 7)$
- $2x \div 4$

**Example 3**  
(page 70)

-  **17. Rentals** The rental fee for a bicycle is \$5, plus \$2 for each hour  $h$  the bike is rented. The expression for the total cost is  $5 + 2h$ . Copy and complete the table for the given number of hours.

Hour	Rental Fee
$h$	$5 + 2h$
1	■
2	■
3	■


## B Apply Your Skills

Evaluate each expression.

- $24 \div d$  for  $d = 3$
- $p + 8$  for  $p = 6$
- $3r - 2$  for  $r = 65$
- $8b - 12$  for  $b = 2.1$
- $n \div 10$  for  $n = 30$
- $n \div 10$  for  $n = 17$
- $3(2c)$  for  $c = 3$
- $18 - 3y$  for  $y = 2.5$
- $75s$  for  $s = 5$
- $5x - y$  for  $x = 12, y = 14$

- 28. Writing in Math** How are numerical and algebraic expressions different? Give examples.

- 29. Data File, p. 61** Write an expression for finding the Year of the Dog in the Gregorian calendar starting with the year 2006.

-  **30. Bricklayer's Formula** The formula  $N = 7 \times \ell \times h$  gives the number of bricks needed for a wall of length  $\ell$  feet and height  $h$  feet. How many bricks are needed for a wall with length 22 feet and height 30 feet?

Copy and complete each table.

31.

$x$	$x + 6$
1	7
4	■
7	■

32.

$x$	$7x$
2	■
4	■
6	■

33.

$x$	$100 - x$
20	■
35	■
50	■

**Challenge**

Evaluate each expression.

34.  $x + y$  for  $x = 12$  and  $y = 37$       35.  $2r + st$  for  $r = 7$ ,  $s = 30$ , and  $t = 5$   
 36.  $4m + n$  for  $m = 1.5$  and  $n = 2.2$       37.  $2ab$  for  $a = 35$  and  $b = 3$   
 38.  $11t - 6v$  for  $t = 9$  and  $v = 4$       39.  $2x + 3y$  for  $x = 3$  and  $y = 4$   
 40. **Stretch Your Thinking** A class attended a school fair. For one activity, each of the 25 students in the class got one throw. When the ball hit the target, the class got 12 points toward prizes. They lost 8 points for each miss. The class started with a score of 0 and ended with a score of 0. How many hits and how many misses did the class have?



**Test Prep**

**Multiple Choice**

41. What is the value of  $3p + 6$  when  $p = 7$ ?  
 A. 7      B. 21      C. 27      D. 45  
 42. Which number pattern can be described by the rule *start with 1 and multiply by 4 repeatedly*?  
 F. 1, 3, 5, 7, ...      G. 1, 2, 4, 7, ...      H. 1, 5, 9, 13, ...      I. 1, 4, 16, 64, ...  
 43. Which of the following numbers can replace  $x$  in the expression  $4.75x + 1$  and produce a whole number?  
 A. 2      B. 3      C. 4      D. 5



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Online lesson quiz at [www.PHSchool.com](http://www.PHSchool.com)

Web Code: aaa-0202

**Mixed Review**

**Lesson 2-1**

**Algebra**

Write the next two terms in each number pattern.

44. 32, 35, 38, 41, ...      45. 729, 243, 81, 27, ...      46. 101, 97, 93, 89, ...

**Lesson 1-7**

Find each product.

47.  $2.43 \times 12$       48.  $4.05 \times 1.5$       49.  $37.4 \times 0.001$