

Name:

Date:

Period:

**Represent each using an algebraic expression.**

1. If Nick has  $x$  dollars and his brother Kevin has three times as much, express algebraically how much money Kevin has.

$x$  = \$ Nick has  
\_\_\_\_\_ = \$ Kevin has

2. Represent the cost of 5 pencils that cost  $c$  cents each.

$c$  = cost of one pencil  
\_\_\_\_\_ = cost of 5 pencils

3. An orange costs  $c$  cents. Represent the cost of a dozen oranges.

\_\_\_\_\_ = cost of one orange  
\_\_\_\_\_ = cost of a dozen oranges

4. A hat costs \$4. Represent in dollars the cost of  $h$  hats.

\_\_\_\_\_ = cost of one hat  
\_\_\_\_\_ = cost of  $h$  hats

5. If Peter weighs  $x$  pounds, represent his weight after he gains 10 pounds.

$x$  = Peter's weight  
\_\_\_\_\_ = Peter's weight after he gains 10 pounds

6. If Sara weighs  $m$  pounds, represent her weight after she loses 5 pounds.

$m$  = Sara's weight  
\_\_\_\_\_ = Sara's weight after she loses 5 pounds

7. Ellen is  $y$  years old now. Represent her age 2 years from now.

$y$  = Ellen's age now  
\_\_\_\_\_ = Ellen's age 2 years from now

8. The width of a rectangle is  $x$  feet. Represent its length in feet if the length is 8 times the width.

$x$  = width  
\_\_\_\_\_ = length

9. The length of a rectangle is  $y$  inches. Represent its width if the width is 3 less than the length.

$y$  = length  
\_\_\_\_\_ = width

10. If 3 pencils cost  $x$  cents, represent in cents the cost of one pencil.

$x$  = cost of 3 pencils  
\_\_\_\_\_ = cost of one pencil

**Write an equation defining  $x$  = the number as the variable, and solve. Write your answer as a statement.**

1. If three times a number is increased by 15, the result is 36. Find the number.  
Let  $x$  = the number

The number is \_\_\_\_\_.

2. If 4 times a number is decreased by 24, the result is 28. Find the number.  
Let  $x$  = the number

The number is \_\_\_\_\_.

3. If 23 is subtracted from twice a number, the result is 35. Find the number.  
Let  $x$  = the number

The number is \_\_\_\_\_.

4. If 18 more than 5 times a number is 13, find the number.  
Let  $x$  = the number

The number is \_\_\_\_\_.

5. If a number is added to twice itself, the result is 36. Find the number.  
Let  $x$  = the number

The number is \_\_\_\_\_.

6. If twice a number is increased by 34, the result is 20. Find the number.  
Let  $x$  = the number

The number is \_\_\_\_\_.