



## Quick Review

- You can use tiles to represent an expression.

This **unit tile** represents  $+1$ .



This **variable tile** or  $x$ -tile represents  $x$ .



- You can use tiles to solve an equation. For example, to solve:  $x + 3 = 14$ :

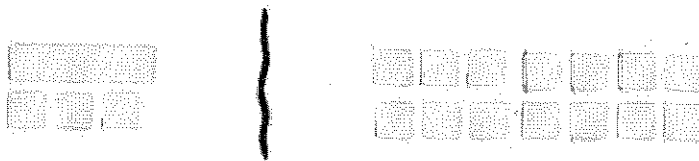
Draw a vertical line in the centre of the page.

It represents the equals sign in the equation.

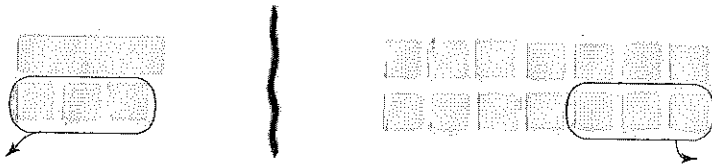
Arrange the tiles on each side of the line to represent the expression or number on each side of the equation.

On the left side, place tiles to represent  $x + 3$ .

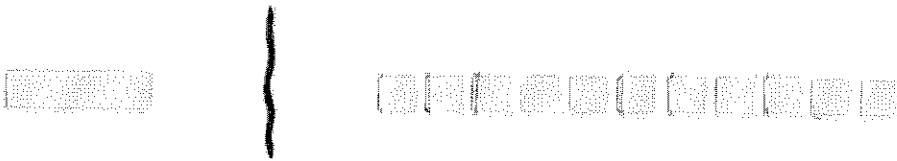
On the right side, place tiles to represent 14.



To isolate the  $x$ -tile, remove 3 unit tiles from each side.

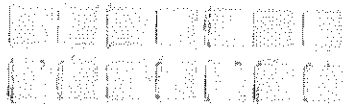


The tiles show the solution is  $x = 11$ .



To *verify* the solution, replace  $x$  with 11 tiles.

Left side:  +  → 14 unit tiles

Right side:  → 14 unit tiles

Since both sides have equal numbers of tiles, the solution  $x = 11$  is correct.

# Practice

1. Complete each algebraic expression.

a) A number increased by 3:  $x + \underline{\hspace{2cm}}$

b) Two times a number:  $\underline{\hspace{2cm}} x$

c) Three more than 4 times a number:  $4x + \underline{\hspace{2cm}}$

d) Twelve less than a number:  $\underline{\hspace{2cm}} - 12$

2. Match each picture to its equation.

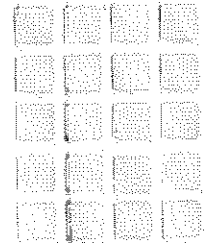
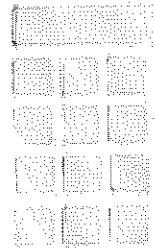
a)  $x + 1 = 3$



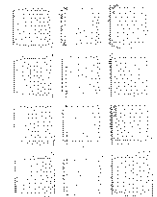
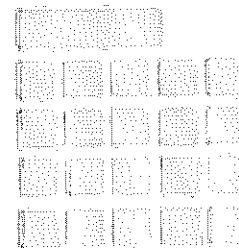
b)  $x + 2 = 4$



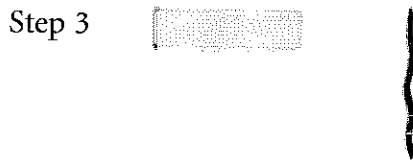
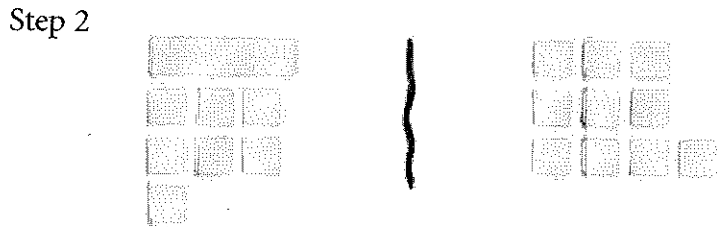
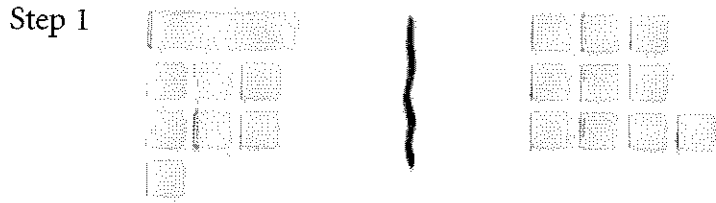
c)  $x + 20 = 12$



d)  $x + 12 = 20$



3. Zephyr had songs in his music player folder.  
 He bought 7 more. Zephyr then had 10 songs.  
 How many did he start with?  
 Complete the solution for the equation:  $x + 7 = 10$



The solution is: \_\_\_\_\_

4. An online book costs \$15.00 to upload to a computer.  
 How many online books can be purchased for \$75.00?  
 a) Write an equation to represent this problem.

\_\_\_\_\_

- b) Solve the equation to find how many online books can be purchased.

\_\_\_\_\_

5. Erica is thinking of a number. She multiplies it by 2, then adds 5.  
 The result is 19. Which number did Erica begin with?  
 a) Write an equation to represent this problem.

\_\_\_\_\_

- b) Solve the equation to find the number.

\_\_\_\_\_

2. Write an equation for each sentence.

Let  $n$  represent the number.

a) Eight less than a number is 2.  $n - \underline{\quad} = \underline{\quad}$

b) One-half a number equals 5.  $\underline{\hspace{10em}}$

c) Four more than double a number is 20.  $\underline{\hspace{10em}}$

d) Six plus three times a number is 9.  $\underline{\hspace{10em}}$

3. Write a sentence for each equation.

a)  $n - 6 = 12$

$\underline{\hspace{10em}}$

b)  $\frac{x}{2} = 10$

$\underline{\hspace{10em}}$

c)  $2p + 10 = 14$

$\underline{\hspace{10em}}$

4. Write an equation for each sentence.

Let  $x$  represent the number.

a) Three more than a number is 12.  $\underline{\hspace{10em}}$

b) Three less than a number is 12.  $\underline{\hspace{10em}}$

c) Three times a number equals 12.  $\underline{\hspace{10em}}$

d) Three more than three times a number is 12.  $\underline{\hspace{10em}}$

e) Three subtracted from three times a number equals 12.  $\underline{\hspace{10em}}$

5. Write an equation for each sentence.

a) The cost of 2 adult tickets at \$5 each and  $n$  child tickets at \$3 each is \$25.

$\underline{\hspace{10em}}$

b) William's age 4 years ago was 12. Let  $a$  years represent William's age now.

$\underline{\hspace{10em}}$

c) The perimeter of a square with side length  $s$  is 28.

$\underline{\hspace{10em}}$