CHAPTER 3, LESSON 1, EXTRA EXAMPLE

Extra Example 1 Adding to Each Side

Solve $x - 9 = -16$.

SOLUTION

On the left side of the equation, 9 is subtracted from x. To isolate x, you need to undo the subtraction by applying the inverse operation of adding 9. Remember, to keep the balance, you must add 9 to *each* side.

$x - 9 = -16$	Write original equation.
$x - 9 + \mathbf{9} = -16 + \mathbf{9}$	Add 9 to each side.
$x = -7$	Simplify.

▶ The solution is -7. Check by substituting -7 for x in the original equation.

✓CHECK

$\boldsymbol{x} - 9 = -16$	Write original equation.
$-\mathbf{7} - 9 \stackrel{?}{=} -16$	Substitute -7 for x.
$-16 = -16$	Solution is correct.