❖ **EXAMPLE 2** **Solve a problem and look back**

Solve the problem in Example 1 by carrying out the plan. Then check your answer.

Solution

STEP 3 **Solve the Problem** Write a verbal model. Then write an equation. Let *s* be the number of short blocks you run.

Length of short block (miles/block)	.	Number of short blocks (blocks)	+	Length of long block (miles/block)	.	Number of long blocks (blocks)	=	Total distance (miles)
0.1	.	*s*	+	0.15	.	4	=	2

The equation is $0.1s + 0.6 = 2$. One way to solve the equation is to use the strategy *guess, check, and revise*.

Guess an even number that is easily multiplied by 0.1. Try 20.

Check whether 20 is a solution.

$$0.1s + 0.6 = 2 \qquad \textbf{Write equation.}$$
$$0.1(20) + 0.6 \stackrel{?}{=} 2 \qquad \textbf{Substitute 20 for } \textbf{\textit{s}}.$$
$$2.6 = 2 \; \textbf{✗} \quad \textbf{Simplify; 20 does not check.}$$

Revise. Because $2.6 > 2$, try an even number less than 20. Try 14.

Check whether 14 is a solution.

$$0.1s + 0.6 = 2 \qquad \textbf{Write equation.}$$
$$0.1(14) + 0.6 \stackrel{?}{=} 2 \qquad \textbf{Substitute 14 for } \textbf{\textit{s}}.$$
$$2 = 2 \; \textbf{✓} \quad \textbf{Simplify.}$$

▶ To run 2 miles, you should run 14 short blocks along with the 4 long blocks you run.

STEP 4 **Look Back** Check your answer by making a table. You run 0.6 mile on long blocks. Each two short blocks add 0.2 mile.

Short blocks	0	2	4	6	8	10	12	14
Total distance	0.6	0.8	1.0	1.2	1.4	1.6	1.8	2.0

The total distance is 2 miles when you run 4 long blocks and 14 short blocks. The answer in Step 3 is correct.

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✓ **GUIDED PRACTICE** for Examples 1 and 2

1. **WHAT IF?** In Example 1, suppose that you want to run a total distance of 3 miles. How many short blocks should you run?