$\checkmark$ 

**GUIDED PRACTICE** for Examples 1 and 2

Solve the equation. Check your solution.

1. 
$$24 - 3m = 5m$$
2.  $20 + c = 4c - 7$ 3.  $9 - 3k = 17 - 2k$ 4.  $5z - 2 = 2(3z - 4)$ 5.  $3 - 4a = 5(a - 3)$ 6.  $8y - 6 = \frac{2}{3}(6y + 15)$ 

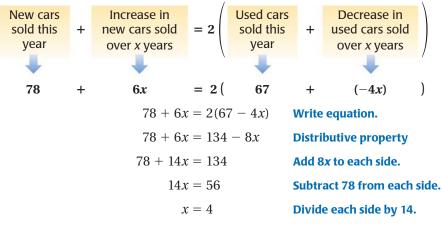
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## EXAMPLE 3 Solve a real-world problem

**CAR SALES** A car dealership sold 78 new cars and 67 used cars this year. The number of new cars sold by the dealership has been increasing by 6 cars each year. The number of used cars sold by the dealership has been decreasing by 4 cars each year. If these trends continue, in how many years will the number of new cars sold be twice the number of used cars sold?

## **Solution**

Let *x* represent the number of years from now. So, 6x represents the increase in the number of new cars sold over *x* years and -4x represents the decrease in the number of used cars sold over *x* years. Write a verbal model.



The number of new cars sold will be twice the number of used cars sold in 4 years.

*CHECK* You can use a table to check your answer.

Year	0	1	2	3	4	The number of new
Used cars sold	67	63	59	55	51	cars sold is twice the number of used
New cars sold	78	84	90	96	102	cars sold in 4 years.

## **GUIDED PRACTICE** for Example 3

**7. WHAT IF?** In Example 3, suppose the car dealership sold 50 new cars this year instead of 78. In how many years will the number of new cars sold be twice the number of used cars sold?