



EXAMPLE 4 TAKS REASONING: Multi-Step Problem

RENTAL BUSINESS A business rents in-line skates and bicycles. During one day, the business has a total of 25 rentals and collects \$450 for the rentals. Find the number of pairs of skates rented and the number of bicycles rented.



Solution

STEP 1 Write a linear system. Let x be the number of pairs of skates rented, and let y be the number of bicycles rented.

$$x + y = 25 \quad \text{Equation for number of rentals}$$

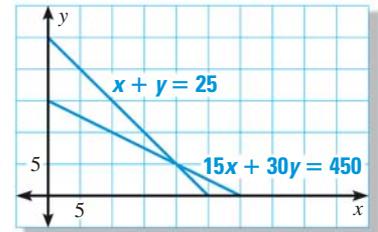
$$15x + 30y = 450 \quad \text{Equation for money collected from rentals}$$

STEP 2 Graph both equations.

STEP 3 Estimate the point of intersection. The two lines appear to intersect at $(20, 5)$.

STEP 4 Check whether $(20, 5)$ is a solution.

$20 + 5 \stackrel{?}{=} 25$	$15(20) + 30(5) \stackrel{?}{=} 450$
$25 = 25 \checkmark$	$450 = 450 \checkmark$



► The business rented 20 pairs of skates and 5 bicycles.

GUIDED PRACTICE for Example 4

6. **WHAT IF?** In Example 4, suppose the business has a total of 20 rentals and collects \$420. Find the number of bicycles rented.

7.1 EXERCISES

HOMEWORK KEY

- = WORKED-OUT SOLUTIONS on p. WS1 for Exs. 15 and 31
- = TAKS PRACTICE AND REASONING Exs. 6, 7, 27, 29, 32, and 37
- = MULTIPLE REPRESENTATIONS Exs. 23, 24, 18, and 38

SKILL PRACTICE

- VOCABULARY** Copy and complete: A(n) ? of a system of linear equations in two variables is an ordered pair that satisfies each equation in the system.
- WRITING** Explain how to use the graph-and-check method to solve a linear system of two equations in two variables.

CHECKING SOLUTIONS Tell whether the ordered pair is a solution of the linear system.

- | | | |
|---|---|---|
| 3. $(-3, 1);$
$x + y = -2$
$x + 5y = 2$ | 4. $(5, 2);$
$2x - 3y = 4$
$2x + 8y = 11$ | 5. $(-2, 1);$
$6x + 5y = -7$
$x - 2y = 0$ |
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