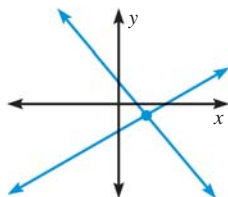


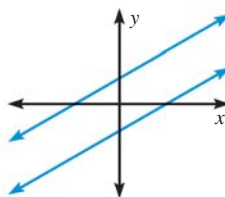
Number of Solutions of a Linear System

One solution



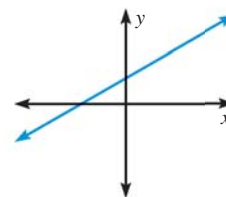
The lines intersect.
The lines have different slopes.

No solution



The lines are parallel.
The lines have the same slope and different y-intercepts.

Infinitely many solutions



The lines coincide.
The lines have the same slope and the same y-intercept.

7.5 EXERCISES

HOMEWORK KEY

- = WORKED-OUT SOLUTIONS on p. WS1 for Exs. 11 and 37
- = TAKS PRACTICE AND REASONING Exs. 24, 25, 32, 33, 40, 42, and 43

SKILL PRACTICE

- VOCABULARY** Copy and complete: A linear system with no solution is called a(n) ? system.
- VOCABULARY** Copy and complete: A linear system with infinitely many solutions is called a(n) ? system.
- WRITING** Describe the graph of a linear system that has no solution.
- WRITING** Describe the graph of a linear system that has infinitely many solutions.

INTERPRETING GRAPHS Match the linear system with its graph. Then use the graph to tell whether the linear system has *one solution*, *no solution*, or *infinitely many solutions*.

5. $x - 3y = -9$
 $x - y = -1$

6. $x - y = -4$
 $-3x + 3y = 2$

7. $x + 3y = -1$
 $-2x - 6y = 2$

