

EXAMPLES 1 and 2on pp. 459–460
for Exs. 8–25**INTERPRETING GRAPHS** Graph the linear system. Then use the graph to tell whether the linear system has *one solution*, *no solution*, or *infinitely many solutions*.

8. $x + y = -2$
 $y = -x + 5$

9. $3x - 4y = 12$
 $y = \frac{3}{4}x - 3$

10. $3x - y = -9$
 $3x + 5y = -15$

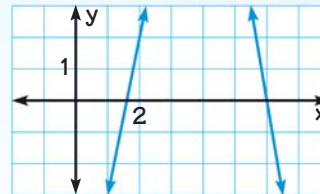
11. $-2x + 2y = -16$
 $3x - 6y = 30$

12. $-9x + 6y = 18$
 $6x - 4y = -12$

13. $-3x + 4y = 12$
 $-3x + 4y = 24$

14. **ERROR ANALYSIS** Describe and correct the error in solving the linear system below.

$$6x + y = 36$$
$$5x - y = 8$$



The lines do not intersect, so there is no solution.

SOLVING LINEAR SYSTEMS Solve the linear system using substitution or elimination.

15. $2x + 5y = 14$
 $6x + 7y = 10$

16. $-16x + 2y = -2$
 $y = 8x - 1$

17. $3x - 2y = -5$
 $4x + 5y = 47$

18. $5x - 5y = -3$
 $y = x + 0.6$

19. $x - y = 0$
 $5x - 2y = 6$

20. $x - 2y = 7$
 $-x + 2y = 7$

21. $-18x + 6y = 24$
 $3x - y = -2$

22. $4y + 5x = 15$
 $x = 8y + 3$

23. $6x + 3y = 9$
 $2x + 9y = 27$

24. **TAKS REASONING** Which of the linear systems has *exactly one* solution?

Ⓐ $-x + y = 9$
 $x - y = 9$

Ⓑ $-x + y = 9$
 $x - y = -9$

Ⓒ $-x + y = 9$
 $-x - y = 9$

Ⓓ $x - y = -9$
 $-x + y = -9$

25. **TAKS REASONING** Which of the linear systems has *infinitely many* solutions?

Ⓐ $15x + 5y = 20$
 $6x - 2y = 8$

Ⓑ $15x - 5y = 20$
 $6x - 2y = -8$

Ⓒ $15x - 5y = -20$
 $6x - 2y = 8$

Ⓓ $15x - 5y = 20$
 $6x - 2y = 8$

EXAMPLE 3on p. 461
for Exs. 26–31**IDENTIFYING THE NUMBER OF SOLUTIONS** Without solving the linear system, tell whether the linear system has *one solution*, *no solution*, or *infinitely many solutions*.

26. $y = -6x - 2$
 $12x + 2y = -6$

27. $y = 7x + 13$
 $-21x + 3y = 39$

28. $4x + 3y = 27$
 $4x - 3y = -27$

29. $9x - 15y = 24$
 $6x - 10y = 16$

30. $0.3x + 0.4y = 2.4$
 $0.5x - 0.6y = 0.2$

31. $0.9x - 2.1y = 12.3$
 $1.5x - 3.5y = 20.5$