

Practice 6-2

Example Exercises

Example 1

Solve each system using substitution.

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|----------------------------------|--|---|
| 1. $y = 2x$
$y = 3x - 2$ | 2. $y = x$
$y = 2x - 4$ | 3. $y = -\frac{2}{5}x - 18$
$2x - 3y = 22$ |
| 4. $y = -2x + 19$
$y = x + 7$ | 5. $y = -\frac{4}{5}x - 10$
$2x + y = 20$ | 6. $x + 2y = -7$
$x = y + 23$ |
| 7. $x + 5y = 2$
$x = -4y + 5$ | 8. $3x + y = 9$
$y = -5x + 9$ | 9. $-2x + y = 6$
$y = 3x + 9$ |
| 10. $2x + y = 4$
$y = 4x + 1$ | 11. $x + y = 38$
$x = 2y - 25$ | 12. $y = x + 2.8$
$y = 2x - 4.6$ |

Example 2

Solve each system using substitution.

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|--------------------------------------|--|---------------------------------------|
| 13. $x + y = 4$
$2x + 3y = 9$ | 14. $3x + y = 3$
$9x + 2y = 7$ | 15. $x - y = 1$
$2x + 4y = 26$ |
| 16. $3x + 5y = 3$
$x + y = -1$ | 17. $7x - y = 10$
$x = \frac{1}{3}y - 2$ | 18. $2x + 3y = 2$
$x + 6y = 4$ |
| 19. $x + y = 9.6$
$x = 2y - 7.2$ | 20. $x + 5y = 8$
$2x + y = 16$ | 21. $2x + 4y = 0$
$2x + 6y = 6$ |
| 22. $2x + 4y = 10$
$2x + 3y = 18$ | 23. $y = \frac{3}{2}x - 12$
$2x - y = 28$ | 24. $5x - 4y = -3$
$-2x + 3y = 18$ |

Example 3

Solve each system using substitution. Write *no solution* or *infinitely many solutions* where appropriate.

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|---|---------------------------------------|---|
| 25. $y = x + 6$
$-x + y = 4$ | 26. $x + 2y = 8$
$x = -2y + 8$ | 27. $x + y = -4$
$2x + 2y = 6$ |
| 28. $x = -\frac{3}{2}y + 3$
$4x + 6y = 12$ | 29. $x - 3y = 4$
$2x - 6y = 8$ | 30. $y = -\frac{3}{4}x + 1$
$3x + 4y = 10$ |
| 31. $5x + y = 4$
$10x + 2y = 8$ | 32. $2x + 3y = 9$
$-4x - 6y = -12$ | 33. $6x + 3y = -6$
$2x + y = -2$ |