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Additional Exercises 5.3
Form I
Solving Systems of Linear Equations by the Addition Method

Solve each system by the addition method. If there is no solution, or an infinite number of solutions, so state. Use set notation to express solution sets.

1. $x + y = -1$
   $x - y = -7$
   1. _____

2. $x + 4y = 12$
   $-x - 6y = -16$
   2. _____

3. $x + 3y = -7$
   $2x - 3y = 22$
   3. _____

4. $4x + 5y = 18$
   $-4x - 5y = 9$
   4. _____

5. $6x - y = -24$
   $-6x + 7y = -12$
   5. _____

6. $x + 9y = 19$
   $-6x + 9y = 12$
   6. _____

7. $x + 8y = 16$
   $-6x + 9y = 18$
   7. _____

8. $x - 5y = -7$
   $4x - 6y = 14$
   8. _____

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9. $11x - 14y = 6$
$3x - 7y = 8$

9. _____

10. $2x + 5y = 17$
$3x - 6y = 12$

10. _____

11. $9x + 4y = 13$
$6x + 5y = 32$

11. _____

12. $4x - 6y = 10$
$6x - 9y = 15$

12. _____

13. $6x - 7y = 16$
$3x + 4y = -7$

13. _____

14. $5x - 2y = 12$
$3x + 3y = 66$

14. _____

15. $10x + 5y = 1$
$15x - 20y = 18$

15. _____

16. $-7x - 17 = 8y$
$-2x + 2y = -8$

16. _____

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Additional Exercises 5.3
Form II
Solving Systems of Linear Equations by the Addition Method

Solve each system by the addition method. If there is no solution, or an infinite number of solutions, so state. Use set notation to express solution sets.

1. $3x + y = 16$
   $5x - y = 16$
   1. _____

2. $7x - 4y = -13$
   $5x + 4y = -23$
   2. _____

3. $8x + 3y = -10$
   $-8x - 11y = 58$
   3. _____

4. $x + 6y = 24$
   $3x - 2y = -8$
   4. _____

5. $10x - 4y = 0$
   $3x + y = -11$
   5. _____

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

7. $9x + 2y = 21$
   $3x - 4y = 63$
   7. _____

8. $10x - 4y = -6$
   $5x + 2y = 5$
   8. _____

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9. $8x - 12y = 23$
$4x + 4y = -6$ 9. _____

10. $7x - 2y = 5$
$-14x + 4y = -20$ 10. _____

11. $12x + 8y = -14$
$9x - 12y = 12$ 11. _____

12. $5x - 7y = -46$
$-3x - 4y = 3$ 12. _____

Solve each system by the method of your choice. If there is no solution, or an infinite number of solutions, so state.

13. $6x - 4y = 4$
$8y = 8 + 16x$ 13. _____

14. $4x + y = 10$
$12x + 3y = 48$ 14. _____

15. $x + 7y = 15$
$8x = 20 - 6y$ 15. _____

16. $\frac{x}{4} + \frac{y}{8} = 3$
$\frac{x}{5} - \frac{y}{4} = 8$ 16. _____

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Additional Exercises 5.3
Form III
Solving Systems of Linear Equations by the Addition Method

Solve each system by the addition method. If there is no solution, or an infinite number of solutions, so state. Use set notation to express solution sets.

1. $x + 4y = 0$
   $x - 4y = 72$
   1. _____

2. $-6x + 3y = 12$
   $6x - 5y = 8$
   2. _____

3. $2x + 8y = 6$
   $x + 4y = 8$
   3. _____

4. $6x - 4y = -4$
   $12x - 8y = -8$
   4. _____

5. $5x + 7y = 16$
   $3x + 2y = 3$
   5. _____

6. $9x + 8y = 117$
   $-7x + 5y = -91$
   6. _____

7. $3x - 2y = 4$
   $6x - 4y = 7$
   7. _____

8. $9x - 6y = 30$
   $7x + 4y = 58$
   8. _____

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9. $8x - 4y = -8$
$3x + 3y = 4$ 9. _____

10. $10x + 8y = -5$
$-15x + 16y = 18$ 10. _____

11. $\frac{x}{2} + \frac{y}{3} = \frac{13}{6}$
$\frac{x}{4} - \frac{x}{6} = \frac{17}{12}$ 11. _____

12. $5x + \frac{y}{8} = -22$
$\frac{x}{4} - 3y = 47$ 12. _____

Solve each system by the method of your choice. If there is no solution, or an infinite number of solutions, so state.

13. $4x = 12y - 8$
$9x - 11y = 46$ 13. _____

14. $y = \frac{2}{3}x + 8$
$y = \frac{3}{4}x + \frac{37}{4}$ 14. _____

15. $5(2x + 3y) = 45$
$6x = 18y$ 15. _____

16. $6x = 7y - 17$
$2x + 2y = -10$ 16. _____