

Homework: Systems of Linear Equations in Two Variables

In Problems 1-7, solve each system by the substitution method.

1. $x + y = 12$ $y = 5x$	2. $x - 5y = -9$ $y = 3x - 1$
3. $y = 7x + 2$ $y = 3x + 6$	4. $4x - 3y = -24$ $7x + 5y = -1$
5. $5x - y = 11$ $3x + 4y = 7$	6. $8x - 2y = 3$ $x = 3y + 1$
7. $3x - 2y = 8$ $3y = 6x - 2$	

In Problems 8-13, solve each system by the addition method

8. $5x - 2y = 13$ $3x + 2y = 11$	9. $7x - y = 33$ $2x + y = 12$
10. $3x + 4y = -10$ $5x + 2y = -12$	11. $9x + 2y = 15$ $3x - 5y = -12$
12. $3x - 7y = 2$ $4x + 3y = -1$	13. $x = 7y - 2$ $3x + 4y = -5$

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In Problems 14-19, solve by the method of your choice. Identify systems with no solution and ones with infinite solutions

14. $9x - y = 7$ $x + 4y = 9$	15. $11x + 3y = 7$ $4x + 2y = 8$
16. $x + 8y = 2$ $-7x + 2y = -3$	17. $8x + y = 3$ $-2x + 3y = 4$
18. $2x - 3y = 7$ $4x - 6y = 14$	19. $3x + y = 2$ $6x - 2 = -2y$