Solving Systems of Equations

Solve each of the following systems of equations by graphing.

1. $\begin{array}{l} x - y = -1 \\ 2x + y = 4 \end{array}$

2. $\begin{array}{l} 2x - 3y = -3 \\ 2x + 3y = 3 \end{array}$

3. $\begin{array}{l} x + 2y = 4 \\ 3x - 2y = 4 \end{array}$

4. $\begin{array}{l} x - 4y = 4 \\ 3x + y = -1 \end{array}$

5. $\begin{array}{l} x - 2y = -2 \\ 2x - y = 2 \end{array}$

6. $\begin{array}{l} x = -2 \\ 4x + 3y = -2 \end{array}$

7. $\begin{array}{l} 3x + y = -2 \\ 6x + 2y = 4 \end{array}$

8. $\begin{array}{l} 2x + y = 3 \\ x - 4y = 6 \end{array}$

9. $\begin{array}{l} -5x + 2y = 4 \\ 15x - 6y = -12 \end{array}$

Solve each of the following systems of equations using the substitution method.

10. $\begin{array}{l} x - y = 3 \\ x + y = 5 \end{array}$

11. $\begin{array}{l} 2x + y = 1 \\ -x - 2y = -5 \end{array}$

12. $\begin{array}{l} x - 4y = -1 \\ 3x + 5y = 31 \end{array}$

13. $\begin{array}{l} 2x - 3y = 6 \\ -6x + y = 14 \end{array}$

14. $\begin{array}{l} 3x - 4y = 10 \\ 2y + 4x = 6 \end{array}$

15. $\begin{array}{l} -2x + 3y = 3 \\ 2x - 3y = 12 \end{array}$

16. $\begin{array}{l} x - 3y = 0 \\ 4x + 8y = 5 \end{array}$

17. $\begin{array}{l} 4x + 5y = 2 \\ 4x - 20y = -3 \end{array}$

18. $\begin{array}{l} 2x - 3y = 1 \\ -6x + 9y = -3 \end{array}$

Solve each of the following systems of equations using the linear combination method.

19. $\begin{array}{l} 4x + 3y = 0 \\ 5x - 3y = 27 \end{array}$

20. $\begin{array}{l} 3x + y = 5 \\ 6x - 2y = 4 \end{array}$

21. $\begin{array}{l} 3x - 2y = -4 \\ 6x + 5y = 37 \end{array}$

22. $\begin{array}{l} 4x - 7y = -5 \\ 3x - 2y = -7 \end{array}$

23. $\begin{array}{l} 2x + 3y = 3 \\ -3x + 5y = 6 \end{array}$

24. $\begin{array}{l} 3x + 2y = -1 \\ 4x - 5y = -32 \end{array}$

25. $\begin{array}{l} 4x - 5y = -2 \\ -12x + 15y = 6 \end{array}$

26. $\begin{array}{l} -7x + 2y = 4 \\ 3x - 5y = -2 \end{array}$

27. $\begin{array}{l} 5x + 2y = -6 \\ 3x + 7y = 8 \end{array}$

Solve each of the following systems of equations using any method you wish.

28. $\begin{array}{l} \dfrac{x}{2} - \dfrac{y}{5} = -4 \\ 3x + \dfrac{y}{2} = -7 \end{array}$

29. $\begin{array}{l} 0.05x + 0.06y = 128 \\ x + y = 2400 \end{array}$

30. $\begin{array}{l} 7x + 2y = 3 \\ 4x + 3y = 11 \end{array}$

31. $\begin{array}{l} \dfrac{1}{4}(x - y) = 2 \\ \dfrac{1}{6}(x + y) = 2 \end{array}$

32. $\begin{array}{l} x + y = 72 \\ 0.10x + 0.25y = 15.90 \end{array}$

33. $\begin{array}{l} \dfrac{a}{4} + \dfrac{b}{3} = -2 \\ \dfrac{a}{2} - b = 16 \end{array}$