

# Solving a System of Equations

## Matrices Cramer's Rule

Solve for the system by using the Matrix Method.

1. 
$$\begin{aligned}x + 2y &= -1 \\3x + y &= 2\end{aligned}$$

2. 
$$\begin{aligned}x - 3y &= -1 \\2x + y &= 5\end{aligned}$$

3. 
$$\begin{aligned}x + 4y &= 1 \\3x - y &= 3\end{aligned}$$

4. 
$$\begin{aligned}x + 5y &= 2 \\4x - y &= 8\end{aligned}$$

5. 
$$\begin{aligned}2x + y &= 1 \\4x - y &= -7\end{aligned}$$

6. 
$$\begin{aligned}2x + y &= 0 \\4x - y &= -6\end{aligned}$$

7. 
$$\begin{aligned}3x - 2y &= -6 \\6x - y &= 3\end{aligned}$$

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

9. 
$$\begin{aligned}-x + 3y &= -14 \\x - y &= 6\end{aligned}$$

10. 
$$\begin{aligned}-x + 3y &= 14 \\x - y &= -6\end{aligned}$$

11. 
$$\begin{aligned}-3x + 2y &= 4 \\4x - y &= 3\end{aligned}$$

12. 
$$\begin{aligned}-3x + 2y &= -4 \\4x - y &= -13\end{aligned}$$

13. 
$$\begin{aligned}x + 5y &= -3 \\-3x - 15y &= 9\end{aligned}$$

14. 
$$\begin{aligned}x + 5y &= -2 \\-3x - 15y &= 6\end{aligned}$$

15. 
$$\begin{aligned}4x + 5y &= -2 \\8x + 10y &= -4\end{aligned}$$

16. 
$$\begin{aligned}4x + 5y &= -5 \\8x + 10y &= -10\end{aligned}$$

$$17. \begin{cases} 3x - y = 4 \\ 3x - y = 5 \end{cases}$$

$$18. \begin{cases} 3x - y = 2 \\ 3x - y = 7 \end{cases}$$

$$19. \begin{cases} -5x + 2y = 8 \\ -10x + 4y = 20 \end{cases}$$

$$20. \begin{cases} -5x + 2y = -8 \\ -10x + 4y = -20 \end{cases}$$

$$21. \begin{cases} x - 3y = -4 \\ 2x - 6y = 8 \end{cases}$$

$$22. \begin{cases} x - 3y = -5 \\ 2x - 6y = 11 \end{cases}$$

$$23. \begin{cases} 2x - y + 4z = -3 \\ x - 4z = 5 \\ 6x - y + 2z = 10 \end{cases}$$

$$24. \begin{cases} 3x + 2y + 2z = 3 \\ x + 2y - z = 5 \\ 2x - 4y + z = 0 \end{cases}$$

$$25. \begin{cases} x + 2y - 3z = 9 \\ 2x - y + 2z = -8 \\ 3x - y - 4z = 3 \end{cases}$$

$$26. \begin{cases} x - 2y - 3z = 3 \\ 2x - y + 2z = 4 \\ 4x + 5y + 6z = 4 \end{cases}$$

$$27. \begin{cases} 3x - y + 2z = 1 \\ x - y + 2z = 3 \\ -2x + 3y + z = 1 \end{cases}$$

$$28. \begin{cases} 3x + 2y - z = 4 \\ 3x - 2y + z = 5 \\ 4x - 5y - z = -1 \end{cases}$$

$$29. \begin{cases} 2x - 3y + 5z = 27 \\ x + 2y - z = -4 \\ 5x - y + 4z = 27 \end{cases}$$

$$30. \begin{cases} x - y + 2z = -3 \\ x + 2y + 3z = 4 \\ 2x + y + z = -3 \end{cases}$$

Solve for the system by using Cramer's Rule.

$$31. \begin{cases} 2x + y = 1 \\ 4x - y = -7 \end{cases}$$

$$32. \begin{cases} 2x + y = 0 \\ 4x - y = -6 \end{cases}$$

$$33. \begin{cases} x + 5y = -3 \\ -3x - 15y = 9 \end{cases}$$

$$34. \begin{cases} x + 5y = -2 \\ -3x - 15y = 6 \end{cases}$$

$$35. \begin{cases} 4x + 5y = -2 \\ 8x + 10y = -4 \end{cases}$$

$$36. \begin{cases} 4x + 5y = -5 \\ 8x + 10y = -10 \end{cases}$$

$$37. \begin{aligned} x - 3y &= -4 \\ 2x - 6y &= 8 \end{aligned}$$

$$38. \begin{aligned} x - 3y &= -5 \\ 2x - 6y &= 11 \end{aligned}$$

$$39. \begin{aligned} x + 2y - 3z &= 9 \\ 2x - y + 2z &= -8 \\ 3x - y - 4z &= 3 \end{aligned}$$

$$40. \begin{aligned} x - 2y - 3z &= 3 \\ 2x - y + 2z &= 4 \\ 4x + 5y + 6z &= 4 \end{aligned}$$

$$41. \begin{aligned} 3x - y + 2z &= 1 \\ x - y + 2z &= 3 \\ -2x + 3y + z &= 1 \end{aligned}$$

$$42. \begin{aligned} 3x + 2y - z &= 4 \\ 3x - 2y + z &= 5 \\ 4x - 5y - z &= -1 \end{aligned}$$