

Solving Matrix Equations with Inverses

Solve each equation.

1) $3B = \begin{bmatrix} 33 & -6 & -18 \end{bmatrix}$

2) $\begin{bmatrix} -25 \\ 15 \end{bmatrix} = 5X$

3) $\begin{bmatrix} 0 & 10 & -4 \end{bmatrix} - X = \begin{bmatrix} -4 & 2 & -8 \end{bmatrix}$

4) $-2Z = \begin{bmatrix} -14 \\ -8 \\ -8 \end{bmatrix}$

Solve each equation or state if there is no unique solution.

5) $\begin{bmatrix} 5 & 7 \\ 0 & 0 \end{bmatrix} X = \begin{bmatrix} -8 \\ 0 \end{bmatrix}$

6) $\begin{bmatrix} -4 & 7 \\ 1 & -4 \end{bmatrix} X = \begin{bmatrix} -40 & 6 \\ 19 & 3 \end{bmatrix}$

7) $\begin{bmatrix} -1 & 0 \\ 5 & -5 \end{bmatrix} C = \begin{bmatrix} 8 & -2 \\ -10 & -25 \end{bmatrix}$

8) $\begin{bmatrix} 6 & 2 \\ -10 & -4 \end{bmatrix} B = \begin{bmatrix} -12 \\ 26 \end{bmatrix}$

9) $\begin{bmatrix} 2 & -6 \\ -1 & 3 \end{bmatrix} X = \begin{bmatrix} 10 & -18 \\ -5 & 9 \end{bmatrix}$

10) $\begin{bmatrix} 1 & 5 \\ 0 & -5 \end{bmatrix} A - \begin{bmatrix} 6 \\ 2 \end{bmatrix} = \begin{bmatrix} 24 \\ -37 \end{bmatrix}$