Bellwork Alg 2A 4th Hour Thursday, January 12, 2017

1. Solve this equation without using division, fractions, or decimals. $5x = 41$

Solve each matrix equation for matrix X.

2. $3\begin{bmatrix} 3 & 1 \\ -7 & 4 \end{bmatrix} - 6X = \begin{bmatrix} -51 & 57 \\ -27 & 12 \end{bmatrix}$

3. $\begin{bmatrix} -5 & 2 \\ 4 & 7 \end{bmatrix} X = \begin{bmatrix} -5 & -34 \\ 47 & 10 \end{bmatrix}$

4. $\begin{bmatrix} -1 & 4 \\ 2 & 1 \end{bmatrix} X = \begin{bmatrix} 3 \\ 120 \end{bmatrix}$

Bellwork Alg 2A 4th Hour Thursday, January 12, 2017 Answers

1. Solve this equation without using division, fractions, or decimals. $5x = 41$

$5^{-1} \cdot 5x = 41 \cdot 5^{-1}$ $X = 8.2$

Solve each matrix equation for matrix X.

2. $3\begin{bmatrix} 3 & 1 \\ -7 & 4 \end{bmatrix} - 6X = \begin{bmatrix} -51 & 57 \\ -27 & 12 \end{bmatrix}$

$-6X = \begin{bmatrix} -51 & 57 \\ -27 & 12 \end{bmatrix} - 3\begin{bmatrix} 3 & 1 \\ -7 & 4 \end{bmatrix}$

$-6^{-1} \cdot -6X = \begin{bmatrix} -60 & 54 \\ -6 & 0 \end{bmatrix} \cdot -6^{-1}$ $X = \begin{bmatrix} 10 & -9 \\ 1 & 0 \end{bmatrix}$

3. $\begin{bmatrix} -5 & 2 \\ 4 & 7 \end{bmatrix} X = \begin{bmatrix} -5 & -34 \\ 47 & 10 \end{bmatrix}$

$A \quad B$

$AX = B$

$X = A^{-1}B$

$X = \begin{bmatrix} 3 & 6 \\ 5 & -2 \end{bmatrix}$

4. $\begin{bmatrix} -1 & 4 \\ 2 & 1 \end{bmatrix} X = \begin{bmatrix} 3 \\ 120 \end{bmatrix}$

$AX = B$

$X = A^{-1}B$

$X = \begin{bmatrix} 53 \\ 14 \end{bmatrix}$