Name : _____ Score : _____

Teacher : _____ Date : _____

Matrix Equations with Inverses

Solve for the given variable. Inverses are required.

1) $\begin{bmatrix} 4 & 2 \\ -3 & 6 \end{bmatrix} K = \begin{bmatrix} -7 & 3 \\ -2 & 1 \end{bmatrix}$

2) $\begin{bmatrix} 5 & -3 \\ -7 & -5 \end{bmatrix} N = \begin{bmatrix} 7 \\ 2 \end{bmatrix}$

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

4) $\begin{bmatrix} -4 & 3 \\ -2 & 4 \end{bmatrix} P = \begin{bmatrix} 1 \\ 5 \end{bmatrix}$

5) $\begin{bmatrix} -2 & 3 \\ -7 & 4 \end{bmatrix} Y = \begin{bmatrix} 5 & -4 \\ 2 & -3 \end{bmatrix}$

6) $\begin{bmatrix} 2 & 7 \\ -5 & -4 \end{bmatrix} R = \begin{bmatrix} 3 & 6 \\ -6 & 4 \end{bmatrix}$

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Matrix Equations with Inverses

Solve for the given variable. Inverses are required.

1) $\begin{bmatrix} 4 & 2 \\ -3 & 6 \end{bmatrix} K = \begin{bmatrix} -7 & 3 \\ -2 & 1 \end{bmatrix}$

$\begin{bmatrix} \frac{-19}{15} & \frac{8}{15} \\ \frac{-29}{30} & \frac{13}{30} \end{bmatrix}$

2) $\begin{bmatrix} 5 & -3 \\ -7 & -5 \end{bmatrix} N = \begin{bmatrix} 7 \\ 2 \end{bmatrix}$

$\begin{bmatrix} \frac{29}{46} \\ \frac{-59}{46} \end{bmatrix}$

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

$\begin{bmatrix} \frac{-25}{13} \\ \frac{27}{13} \end{bmatrix}$

4) $\begin{bmatrix} -4 & 3 \\ -2 & 4 \end{bmatrix} P = \begin{bmatrix} 1 \\ 5 \end{bmatrix}$

$\begin{bmatrix} \frac{11}{10} \\ \frac{9}{5} \end{bmatrix}$

5) $\begin{bmatrix} -2 & 3 \\ -7 & 4 \end{bmatrix} Y = \begin{bmatrix} 5 & -4 \\ 2 & -3 \end{bmatrix}$

$\begin{bmatrix} \frac{14}{13} & \frac{-7}{13} \\ \frac{31}{13} & \frac{-22}{13} \end{bmatrix}$

6) $\begin{bmatrix} 2 & 7 \\ -5 & -4 \end{bmatrix} R = \begin{bmatrix} 3 & 6 \\ -6 & 4 \end{bmatrix}$

$\begin{bmatrix} \frac{10}{9} & \frac{-52}{27} \\ \frac{1}{9} & \frac{38}{27} \end{bmatrix}$