

Name : _____

Score : _____

Teacher : _____

Date : _____

Matrix Equations with Inverses

Solve for the given variable. Inverses are required.

$$1) \begin{bmatrix} 1 & -4 \\ 2 & -7 \end{bmatrix} Y = \begin{bmatrix} 7 & -5 \\ 6 & 3 \end{bmatrix}$$

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

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

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

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

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



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Solve for the given variable. Inverses are required.

$$1) \begin{bmatrix} 1 & -4 \\ 2 & -7 \end{bmatrix} Y = \begin{bmatrix} 7 & -5 \\ 6 & 3 \end{bmatrix}$$
$$\begin{bmatrix} -25 & 47 \\ -8 & 13 \end{bmatrix}$$

$$2) \begin{bmatrix} -4 & 1 \\ 2 & 3 \end{bmatrix} G = \begin{bmatrix} 6 \\ -2 \end{bmatrix}$$
$$\begin{bmatrix} -\frac{10}{7} \\ \frac{2}{7} \end{bmatrix}$$

$$3) \begin{bmatrix} -7 & -4 \\ -1 & -2 \end{bmatrix} P = \begin{bmatrix} 4 \\ -6 \end{bmatrix}$$
$$\begin{bmatrix} -\frac{16}{5} \\ \frac{23}{5} \end{bmatrix}$$

$$4) \begin{bmatrix} -3 & 7 \\ 2 & -6 \end{bmatrix} Q = \begin{bmatrix} 3 & 6 \\ -2 & -1 \end{bmatrix}$$
$$\begin{bmatrix} -1 & -\frac{29}{4} \\ 0 & -\frac{9}{4} \end{bmatrix}$$

$$5) \begin{bmatrix} -1 & 5 \\ 3 & 2 \end{bmatrix} X = \begin{bmatrix} -2 \\ -3 \end{bmatrix}$$
$$\begin{bmatrix} -\frac{11}{17} \\ \frac{-9}{17} \end{bmatrix}$$

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

