Matrix Multiplication

Version 2

Name: _____ **Date**: _____ **Score**: _____

Direction: Simplify by multiplying the following matrices. Show all your work in the space provided.

1) $\begin{bmatrix}1 & 2 & 3 & 4\end{bmatrix}\cdot\begin{bmatrix}-1 & 0\\ 0 & -1\\ -1 & 0\\ 0 & -1\end{bmatrix}=$

2) $\begin{bmatrix}8 & 2 & 1\\ -1 & 0 & 4\\ 3 & -2 & 0\end{bmatrix}\cdot\begin{bmatrix}-3\\ 0\\ 1\end{bmatrix}=$

3) $\begin{bmatrix}1 & 0 & 1\\ 0 & 1 & 0\end{bmatrix}\cdot\begin{bmatrix}1 & -1 & 1\\ -1 & 1 & -1\\ 1 & -1 & 1\end{bmatrix}=$

4) $\begin{bmatrix}1 & 2\\ -1 & 2\\ 0 & 0\end{bmatrix}\cdot\begin{bmatrix}-1 & 0\\ 0 & -1\end{bmatrix}=$

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1) $\begin{bmatrix}1 & 2 & 3 & 4\end{bmatrix}\cdot\begin{bmatrix}-1 & 0\\ 0 & -1\\ -1 & 0\\ 0 & -1\end{bmatrix}=\begin{bmatrix}-4 & -6\end{bmatrix}$

2) $\begin{bmatrix}8 & 2 & 1\\ -1 & 0 & 4\\ 3 & -2 & 0\end{bmatrix}\cdot\begin{bmatrix}-3\\ 0\\ 1\end{bmatrix}=\begin{bmatrix}-23\\ 7\\ -9\end{bmatrix}$

3) $\begin{bmatrix}1 & 0 & 1\\ 0 & 1 & 0\end{bmatrix}\cdot\begin{bmatrix}1 & -1 & 1\\ -1 & 1 & -1\\ 1 & -1 & 1\end{bmatrix}=\begin{bmatrix}2 & -2 & 2\\ -1 & 1 & -1\end{bmatrix}$

4) $\begin{bmatrix}1 & 2\\ -1 & 2\\ 0 & 0\end{bmatrix}\cdot\begin{bmatrix}-1 & 0\\ 0 & -1\end{bmatrix}=\begin{bmatrix}-1 & -2\\ 1 & -2\\ 0 & 0\end{bmatrix}$