Lesson 3 (Matrix Multiplication) Multiply the following matrices.

1. $\begin{pmatrix} 2 & 1 \\ 0 & -1 \end{pmatrix} \begin{pmatrix} 0 & 1 & 1 \\ 3 & -1 & 0 \end{pmatrix} = ?$

2. $\begin{pmatrix} 0 & 1 & 1 \\ 3 & -1 & 0 \end{pmatrix} \begin{pmatrix} 2 & 1 \\ 0 & -1 \end{pmatrix} = ?$

3. $\begin{pmatrix} 8 & 0 & 0 \\ 1 & 1 & 0 \end{pmatrix} \begin{pmatrix} 1 \\ 0 \\ -1 \end{pmatrix} = ?$

4. $\begin{pmatrix} 1 & 2 \end{pmatrix} \begin{pmatrix} 8 & 0 & 0 \\ 1 & 1 & 0 \end{pmatrix} = ?$

5. $\begin{pmatrix} 0 \\ 2 \\ 1 \end{pmatrix} \begin{pmatrix} 1 & 0 & 1 \end{pmatrix} = ?$