

MORE PRACTICE – Matrix Multiplication

Find the product, if possible.

1. $\begin{bmatrix} 1 & 2 \\ -1 & 3 \end{bmatrix} \times \begin{bmatrix} 2 & 0 \\ -3 & 1 \end{bmatrix}$

2. $\begin{bmatrix} 3 \\ 2 \end{bmatrix} \cdot [5 \ 1]$

3. $\begin{bmatrix} 3 \\ 5 \\ 1 \end{bmatrix} \times [-1 \ 0]$

4. $\begin{bmatrix} 3 & 0 \\ 1 & -1 \end{bmatrix} \begin{bmatrix} 2 & 3 \\ 5 & -1 \end{bmatrix}$

5. $[3 \ 0 \ -5] \cdot \begin{bmatrix} 4 \\ -1 \\ 2 \end{bmatrix}$

6. $\begin{bmatrix} 1 & 1 & 3 \\ 2 & -1 & 0 \\ 5 & 2 & 3 \end{bmatrix} \begin{bmatrix} 4 & 3 & 0 \\ 3 & -2 & 1 \\ 0 & -1 & 1 \end{bmatrix}$

7. Show that the Associative property of multiplication, $A \cdot (B \cdot C) = (A \cdot B) \cdot C$ is true for the matrices:

$$A = \begin{bmatrix} 1 & 2 \\ 2 & 4 \end{bmatrix}, B = \begin{bmatrix} -1 & 0 \\ 1 & 2 \end{bmatrix}, C = \begin{bmatrix} 1 & -2 \\ 3 & 3 \end{bmatrix}$$