5

$$\begin{bmatrix} -1 & 2 & 0 \\ 0 & 3 & 6 \end{bmatrix} - \begin{bmatrix} 0 & -4 & 3 \\ 9 & -4 & -3 \end{bmatrix}$$

6

$$\begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \end{bmatrix} \times \begin{bmatrix} 7 & 8 \\ 9 & 10 \\ 11 & 12 \end{bmatrix} =$$

7

Solve for X.

$$X + \begin{bmatrix} 12 & 14 \\ 19 & 21 \\ 3 & -14 \end{bmatrix} = \begin{bmatrix} -2 & -5 \\ 13 & 7 \\ -9 & 12 \end{bmatrix}$$

8

The Eagle's Nest sells sweatpants for $25, long sleeve t-shirts for $15, and t-shirts for $10. On Friday, they sold 5 sweatpants, 8 long sleeve t-shirts, and 11 t-shirts. Write the matrix operation that would compute the store's total income for that day.

9

Solve for x and y: $\begin{bmatrix} -3x & -1 \\ 4 & y \end{bmatrix}\begin{bmatrix} 9 & -4 \\ -5 & 3 \end{bmatrix}=\begin{bmatrix} -103 & 45 \\ 11 & -1 \end{bmatrix}$

10

If A is a 2 x 3 matrix, B is a 2 x 2 matrix, and C is a 3 x 2 matrix, what are the dimensions of A x C x B?

11

Determine the value of x in the following system of equations.

$$\begin{cases} 4x+2y+3z=1 \\ 2x-3y+5z=-14 \\ 6x-\ y+4z=-1 \end{cases}$$

12

Find the values of x and y for this matrix equation:

$$\begin{bmatrix} -2 & 1 & 2 \\ 3 & 2 & 4 \\ 0 & -2 & 4 \end{bmatrix}\begin{bmatrix} 1 \\ x \\ 3 \end{bmatrix}=\begin{bmatrix} 6 \\ 19 \\ y \end{bmatrix}$$

1

$$3\begin{bmatrix} 5 & 2 & 11 \\ 9 & 4 & 14 \end{bmatrix} =$$

2

$$\underset{\text{Matrix A}}{\begin{bmatrix} 1 & 4 & 6 \end{bmatrix}} \cdot \underset{\text{Matrix B}}{\begin{bmatrix} 2 & 3 \\ 5 & 8 \\ 7 & 9 \end{bmatrix}}$$

3

In 1966, Washington and New York played the highest scoring game in the NFL history. The table summarizes the scoring. A touchdown is worth 6 points, a field goal is worth 3 points, a safety is worth 2 points and an extra point is worth 1 point. Using matrix multiplication, what was the final score?

	TD	FG	S	EP
Washington	10	1	0	9
New York	6	0	0	5

4

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