Name: _____ Date:_____ Period: _____ **ID: 1**

12.2 Corrective Assignment – Matrix Multiplication

For 1-4, find the product of the two matrices. Box your final answer.

1) $\begin{bmatrix} 2 & 1 \\ -4 & -1 \end{bmatrix} \cdot \begin{bmatrix} -4 & 5 \\ -5 & 0 \end{bmatrix}$

2) $\begin{bmatrix} 3 & -5 \end{bmatrix} \cdot \begin{bmatrix} 6 & 3 \\ -6 & -3 \end{bmatrix}$

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

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

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For 5-8, the dimensions of Matrix *A* and Matrix *B* are listed. What are the dimensions of the product of *AB*? If it is not possible, then write "undefined."

5) Matrix ***A***: 1 x 3
Matrix ***B***: 1 x 4

Matrix ***AB***: _____ x _____

6) Matrix ***A***: 1 x 5
Matrix ***B***: 5 x 1

Matrix ***AB***: _____ x _____

7) Matrix ***A***: 2 x 7
Matrix ***B***: 7 x 9

Matrix ***AB***: _____ x _____

8) Matrix ***A***: 2 x 2
Matrix ***B***: 2 x 5

Matrix ***AB***: _____ x _____

For 11-12, solve for the variables x and y.

9). $\begin{bmatrix} \boldsymbol{x} & -2 \\ -4 & -1 \end{bmatrix} \cdot \begin{bmatrix} 4 & \boldsymbol{y} \\ 0 & -6 \end{bmatrix} = \begin{bmatrix} 0 & 12 \\ -16 & -6 \end{bmatrix}$

10). $\begin{bmatrix} \boldsymbol{x} & 1 \end{bmatrix} \cdot \begin{bmatrix} -6 & -5 \\ \boldsymbol{y} & -3 \end{bmatrix} = \begin{bmatrix} -30 & -23 \end{bmatrix}$

Answer Key to 12.2 CA1 – Matrix Multiplication

1) $\begin{bmatrix} -13 & 10 \\ 21 & -20 \end{bmatrix}$ 2) $\begin{bmatrix} 48 & 24 \end{bmatrix}$ 3) $\begin{bmatrix} -16 & 9 & 0 \\ 54 & -26 & 6 \end{bmatrix}$ 4) $\begin{bmatrix} 1 & 2 & -8 \\ 28 & -4 & 16 \end{bmatrix}$

5) undefined 6) 1 x 1 7) 2 x 9 8) 2 x 5

9) $x = 0; y = 3$ 10) $x = 4; y = -6$