Adding and Subtracting Matrices

Name _____

Date _____ Period _____

Adding Matrices

To add matrices, add the entries in corresponding quadrants.

$$\begin{bmatrix} 5 & 1 \\ -5 & 4 \end{bmatrix} + \begin{bmatrix} 2 & 5 \\ -1 & -6 \end{bmatrix} = \begin{bmatrix} 5+2 & 1+5 \\ -5+-1 & 4+-6 \end{bmatrix} = \begin{bmatrix} 7 & 6 \\ -6 & -2 \end{bmatrix}$$

Notice: You can only add matrices with the same dimensions

Subtracting Matrices

To subtract matrices, subtract the entries in corresponding quadrants.

$$\begin{bmatrix} 5 & 1 \\ -5 & 4 \end{bmatrix} - \begin{bmatrix} 2 & 5 \\ -1 & -6 \end{bmatrix} = \begin{bmatrix} 5-2 & 1-5 \\ -5--1 & 4--6 \end{bmatrix} = \begin{bmatrix} 3 & -4 \\ -4 & 10 \end{bmatrix}$$

Notice: You can only subtract matrices with the same dimensions

Adding and Subtracting Matrices

$$A=\begin{bmatrix} 4 & 2 \\ -3 & 1 \end{bmatrix}$$

$$B=\begin{bmatrix} -2 & 0 \\ 4 & -5 \end{bmatrix}$$

$$C=\begin{bmatrix} 4 & -2 & -3 \\ -1 & 7 & 9 \end{bmatrix}$$

$$D=\begin{bmatrix} 5 & 9 & -2 \\ 0 & 2 & 3 \end{bmatrix}$$

Find $A+B$

$C-D$

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$$C=\begin{bmatrix} 4 & -2 & -3 \\ -1 & 7 & 9 \end{bmatrix}$$

$$D=\begin{bmatrix} 5 & 9 & -2 \\ 0 & 2 & 3 \end{bmatrix}$$

Find $A-2B$

$2C+3A$