

Section 7.2 – Algebra of Matrices

Name _____

Given the following matrices, perform the following:

Given the following: $A = \begin{bmatrix} 3 & 2 & -1 \\ 7 & 3 & -2 \\ 6 & 1 & 0 \end{bmatrix}$

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

Find $A+B$ Find $A - B$ Find $2A$ Find $3B$ Find $2A - 3B$ Find $3B - 2A$

Additive Inverse Matrix (for 3 X 3)

Find $-A$

Matrix Multiplication – show all work!

$A = \begin{bmatrix} 7 & 3 \\ 6 & 1 \end{bmatrix} \quad B = \begin{bmatrix} 4 & 2 \\ 2 & 6 \end{bmatrix}$

AB =

BA =

 $A^2 =$

$$A = \begin{bmatrix} 3 & 2 & -1 \\ 7 & 3 & -2 \\ 6 & 1 & 0 \end{bmatrix}$$

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

AB =

BA =

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

$$B = \begin{bmatrix} 0 & -1 & 2 \\ 1 & 2 & 4 \end{bmatrix}$$

AB =

BA =

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

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

AB =

BA =

$$A = \begin{bmatrix} 1 & 2 \\ 3 & 44 \end{bmatrix}, \quad B = \begin{bmatrix} 5 & 6 \\ 7 & 8 \end{bmatrix}$$

Find $2A - 3B = B$