MAT 216 (Introduction to Matrix Algebra), Prof. Jim Swift
Workheet 2 = Quiz 1: Basic Matrix Operations

Name: key

Compute the following quantities:

$$\begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix} + 2\begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix} = \begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix} + \begin{bmatrix}2 & 4\\ 6 & 8\end{bmatrix} = \begin{bmatrix}3 & 6\\ 9 & 12\end{bmatrix} \text{ or } = 3\begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix} = \begin{bmatrix}3 & 6\\ 9 & 12\end{bmatrix}$$

$$\begin{bmatrix}1 & 2\\ 3 & 4\end{bmatrix}\begin{bmatrix}5\\ 6\end{bmatrix} = \begin{bmatrix}5+12\\ 15+24\end{bmatrix} = \begin{bmatrix}17\\ 39\end{bmatrix}$$

If A and B are 2×3 matrices, and C is a 3×1 matrix, which of these are defined? (Circle the ones that are defined.)

AB	AC	CA	$A+B$	$A+C$
$2\times 3 \;\; 2\times 3$	$2\times 3 \;\; 3\times 1$	$3\times 1 \;\; 2\times 3$	same size	different size
$\neq$	$=$	$\neq$		
NOT defined	defined	not defined	defined	not defined