

Matrix Operations vs. Array Operations

$a = \begin{matrix} 1 & 2 \\ 3 & 4 \end{matrix}$	$B = \begin{matrix} 5 & 6 \\ 7 & 8 \end{matrix}$
--	--

Matrix Operations			
$a*b$	$1*5+2*7 \quad 1*6+2*8$ $3*5+4*7 \quad 3*6+4*8$		Answer = 19 22 43 50
a/b	$1*(-4)+2*7/2 \quad 1*3+2*(-5/2)$ $3*(-4)+4*7/2 \quad 3*3+4*(-5/2)$		Answer = 3.0000 -2.0000 2.0000 -1.0000
a^2	$1*1+2*3 \quad 1*2+2*4$ $3*1+4*3 \quad 3*2+4*4$		Answer = 7 10 15 22

Array Operations			
$a.*b$	$1*5 \quad 2*6$ $3*7 \quad 4*8$		Answer = 5 12 21 32
$a./b$	$1/5 \quad 2/6$ $3/7 \quad 4/8$		Answer = 0.2000 0.3333 0.4286 0.5000
$a.^2$	$1*1 \quad 2*2$ $3*3 \quad 4*4$		Answer = 1 4 9 16