Matrix Computation

In Matlab, the addition(+), subtraction(-) and multiplication(*) of matrices are pleasantly easy. For example, assume A is a matrix. If you want to increase all the elements in A by 1, simply type A + 1. Similar formatting applies to subtraction and multiplication. Assume B is another matrix, as long as the dimensions of each matrix correctly match, subtracting B from A is simply A - B and multiplying A to B is A * B.

Besides these basic operators, here are some more functions dedicated to matrices. Assume A and B are matrices and c is a scalar numeric value:

Operator, function	What it does
A’	returns the transpose of matrix A
A .* B	multiplies the elements in A by the elements in B. A and B must have the same dimension. Note that this is different from A*B.
A ./ c	divides the elements in A by c.
inv(A)	returns the inverse of matrix A
A .^ B	raise the elements in A by power of elements in B
A / B	equivalent to A * inv(B)
eig(A)	returns the eigenvalues of A
svd(A)	returns the singular value of A
det(A)	returns the determinant of A

For more information, you can always visit
http://www.mathworks.com/help/matlab/