

Element by Element Operations – Reference Sheet

In element-by-element operations, the dimensions of the arrays must match and will result in an array of the same dimensions.

Manage element-by-element computations with a period character.

Operation	Format	Example	Period Character Use
Addition	(A + B)	[1 0 5] + [1 3 2] = [2 3 7]	No period character
Subtraction	(A - B)	[1 0 5] - [1 3 2] = [0 -3 3]	No period character
Multiplication of a scalar and an array	(a * B)	3 * [3 5 4] = [9 15 12]	No period character
Multiplication of arrays	(A .* B)	[8 1 5] .* [2 3 4] = [16 3 20]	Requires period character
Division of an array by a scalar	(A / b)	[16 10 22] / 2 = [8 5 11]	No period character
Division of arrays	(A ./ B)	[24 25 35] ./ [8 5 7] = [3 5 5]	Requires period character
Division of a scalar by an array	(a ./ B)	12 ./ [4 1 2] = [3 12 6]	Requires period character
Exponentiation of arrays	(A .^ B)	[8 5 21] .^ [2 3 1] = [64 125 21]	Requires period character
Exponentiation involving a scalar	(a .^ B) or (B .^ a)	2 .^ [4 2 7] = [16 4 128] [3 10 -1] .^ 3 = [27 1000 -1]	Requires period character