

# Math-c Documentation

## Logarithmic, power and exponential functions

The input values for these functions can be a scalar, vectors or matrices; in case of vectors and matrices the inputs function parameters are set one element of the vector/matrix to other element of the other vector/matrix in the same position, including nested matrix.

*$y = \text{hypot}(a,b)$*

Hypotenuse

a -> real value

b -> real value

returns

y ->  $\sqrt{a^2+b^2}$

*$y = \text{log}(x)$*

natural logarithm

x -> value

returns

y -> natural logarithm of x, if x is invalid value for logarithm, returns (nan)

*$y = \text{log10}(x)$*

logarithm base 10

x -> value

returns

y -> logarithm base 10 of x, if x is invalid value for logarithm, returns, (nan)

*y = log2(x)*

logarithm base 2

x -> value

returns

y -> logarithm base 2 of x, if x is invalid value for logarithm, returns, (nan)

*r = loglog(...)*

plot data in log scale in axis x and y.(More info in Graph section)

(...) -> values (vectors)

returns

r -> 0

*r = semilogx(...)*

plot data in log scale in axis x.(More info in Graph section)

(...) -> values (vectors)

returns

r -> 0

*r = semilogy(...)*

plot data in log scale in axis y.(More info in Graph section)

(...) -> values (vectors)

returns

r -> 0

y =  $\sqrt{x}$  //  $\sqrt{}$  ALT+V in some keywords

$y = \text{sqrt}(x)$

square root

x -> value

returns

y -> square root of x