Mathematical Commands

Mathmatical and calculation instructions and functions

Fix NUMBER
Set the number of decimal of floating point numbers to ASCII conversion (used in both Print and =Str$())
Parameters:
   NUMBER: The number of decimals

Radian
Set the default angle representation in AOZ to Radians.

Degree
Set the default angle representation in AOZ to degrees.

Rnd CEILING
Return a random number
Parameters:
   CEILING: An optional value indicating to generate the value as an integer betwwen 0 and CEILING. If not specified the function will return a floating point value between 0 and 1
Value returned:
   integer: A value between 0 and CEILING (excluded) if the parameter is specified

Randomize SEED
Switch the random number generator to Mersenne Twist and generate a new seed.
Parameters:
   SEED: An optional SEED to initiate the generation of random numbers. If not specified a value callated out of the TIMER will be used.

Randomize NUMBER
Return the sign of a number
Parameters:
   NUMBER: The value to get the sign of
Value returned:
   integer: -1 if the number is negative, 1 if it is greater than 0, 0 if it is equal to zero

Abs NUMBER
Return the absolute value of a number
Parameters:
   NUMBER: The number to get the absolute value from
Value returned:
   number: NUMBER if the number is positive, -NUMBER if the number is negative

Int FLOATNUMBER
Return the greatest integer number below the given value
Parameters:
   FLOATNUMBER: The number to get the integral part from
Value returned:
   integer: If FLOATNUMBER is greater than zero, return the integral part, if negative, return integral(FLOATNUMBER)

PI#
Return the value of PI
Value returned:
   float: the value of PI up to the 16th decimal, 3.141592653589793238

Min number, number
Return the minimal value of two numbers
Parameters:
   number: The first value to test
   number: The second value to test
Value returned:
   number: The minimal value of the two numbers

Min string, string
Compares two strings and return the one beginning with the minimal ASCII representation value
Parameters:
   string: The first string to test
   string: The second string to test
Value returned:
   number: The string beginning with the minimal ASCII representation

Max number, number
Return the maximal value of two numbers
Parameters:
   number: The first value to test
   number: The second value to test
Value returned:
   number: The maximal value of the two numbers

Max string, string
Compares two strings and return the one beginning with the maximal ASCII representation value
Parameters:
   string: The first string to test
   string: The second string to test
Value returned:
   number: The string beginning with the maximal ASCII representation

Sin angle
Return the Sine of an angle
Parameters:
    angle: The angle to calculate the Sine from, in Radian by default and degrees after the "Degree" instruction has been used
Value returned:
   float: The value of the Sine of the angle

Cos angle
Return the Cosine of an angle
Parameters:
    angle: The angle to calculate the Cosine from, in Radian by default and degrees after the "Degree" instruction has

been used
Value returned:
   float: The value of the Cosine of the angle

Tan angle
Return the Tangent of an angle
Parameters:
   angle: The angle to calculate the Tangent from, in Radian by default and degrees after the "Degree" instruction has been used
Value returned:
   float: The value of the Tangent of the angle

ASin number
Return the Arc Sine of a number
Parameters:
   number: The number from which to extract the Arc Sine from
Value returned:
   angle: The value of the Arc Sine, an angle expressed in Radian by default or degree after the "Degree" instruction has been used

ACos number
Return the Arc Cosine of a number
Parameters:
   number: The number from which to extract the Arc Cosine from
Value returned:
   angle: The value of the Arc Cosine, an angle expressed in Radian by default or degree after the "Degree" instruction has been used

ATan number
Return the Arc Tangent of a number
Parameters:
   number: The number from which to extract the Arc Tangent from
Value returned:
   angle: The value of the Arc Tangent, an angle expressed in Radian by default or degree after the "Degree" instruction has been used

HSin angle
Return the Hyperbolic Sine of a number
Parameters:
   angle: The angle to calculate the Hyperbolic Sine from, in Radian by default and degrees after the "Degree" instruction has been used
Value returned:
   float: The value of the Hyperbolic Sine of the angle

HCos angle
Return the Hyperbolic Cosine of a number
Parameters:
   angle: The angle to calculate the Hyperbolic Cosine from, in Radian by default and degrees after the "Degree" instruction has been used
Value returned:
   float: The value of the Hyperbolic Cosine of the angle

HTan angle

Return the Hyperbolic Tangent of a number

Parameters:

angle: The angle to calculate the Hyperbolic Tangent from, in Radian by default and degrees after the "Degree" instruction has been used

Value returned:

float: The value of the Tangent of the angle

Sqr number

Return the square root of a number

Parameters:

number: The positive number out of which to calculate the square root

Value returned:

float: The value of the Square Root of the number

Log number

Return the base 10 logarythm of a number

Parameters:

number: The number out of which to calculate the base 10 logarythm

Value returned:

float: The value of the base 10 logarythm

Ln number

Return the Neperian Logarythm of a number

Parameters:

number: The number out of which to calculate the Neperian Logarythm

Value returned:

float: The value of the Neperian Logarythm

Exp number

Return the exponantial of a number

Parameters:

number: The number out of which to calculate the Exponential

Value returned:

float: The value of the Exponantial