Constants

Constant	Description	Value
pi	the ratio of the circumference to the diameter of a circle	3.141592653589793
e	base of the natural system of logarithms	2.718281828459045

Operators

Precedence	Operator	Description	Example
7	- (unary)	negation	-1 #> -1
6	^	exponentiation	2^3 #> 8
5	*	multiplication	2*2 #> 4
5	/	division	2/2 #> 1
5	div	integer division	7 div 2 #> 3
5	mod	modulus	7 mod 2 #> 1
4	+	addition	1+1 #> 2
4	-	subtraction	1-1 #> 0
3	= ==	equal to	1 = 1 #> true
3	<> !=	not equal to	1 <> 2 #> true
3	<	less than	2 < 2 #> false
3	<=	less than or equal to	2 <= 2 #> true
3	>	greater than	3 > 2 #> true
3	>=	greater than or equal to	3 >= 4 #> false
2	& &&	logical and	true() & false() #> false
1	| ||	logical or	true() | true() #> true

Functions

Function	Description	Example
abs(x)	the absolute value of x	abs(-1) #> 1
acos(x) arccos(x)	the inverse cosine of x	acos(-1) #> 3.14159265
and(x1;x2;...xn)	logical and	and(1<2;2>1) #> true
asin(x) arcsin(x)	the inverse sine of x	asin(-1) #> -1.57079633
atan(x) **arctan(x)**	the inverse tangent of x	atan(-1) #> -0.785398163
avg(x1;...;xN) mean(x1;...;xN)	the arithmetic mean of the given numbers	avg(1;2;3) #> 2
ceil(x)	the smallest integer not less than x	ceil(2.2) #> 3
cos(x)	the cosine of x	cos(0) #> 1
cosh(x)	the hyperbolic cosine of x	cosh(0) #> 1
cotan(x) cot(x)	the cotangent of x	cotan(pi/2) #> 0
exp(x)	Euler's number e raised to the power of x	exp(2) #> 7.38905609893065
floor(x)	the largest integer not greater than x	floor(2.7) #> 2
frac(x)	the fractional part of x	frac(2.7) #> 0.7
if(b;x;y) iff(b;x;y) iif(b;x;y)	returns x if b evaluates to true, otherwise y is returned	if(1>2;1;2) #> 2
ipower(x;y)	raises x to a power of y (y is an integer)	ipower(4;2) #> 16
ln(x)	the natural logarithm (base e) of x	ln(7.38905609893065) #> 2
lg(x) log(x)	the base 10 logarithm of x	lg(1000) #> 3
max(x1;...;xN)	the maximum of the given numbers	max(1;2;3) #> 3
min(x1;...;xN)	the minimum of the given numbers	min(1;2;3) #> 1
not(b)	the logical complement of b	not(false) #> true

or(x1;x2;...;xn)	logical or	or(1<2;2<1) #> true
power(x;y) pow(x;y)	raises x to a power of y	power(4;2.2) #> 21.112126572366314
random()	returns a random number between 0 and 1	random() #> ...
round(x)	rounds x to the nearest integer	round(2.5) #> 3
sin(x)	the sine of x	sin(2*pi) #> 0
sinh(x)	the hyperbolic sine of x	sinh(0) #> 0
sqr(x)	the square of x	sqr(2) #> 4
sqrt(x)	the square root of x	sqrt(4) #> 2
tan(x)	the tangent of x	tan(pi/4) #> 1
tanh(x)	the hyperbolic tangent of x	tanh(0.5) #> 0.46...
trunc(x) int(x)	the integer part of x	trunc(2.7) #> 2