

ES5 Property or operator	Proposed Harmony	C math.h	C99 math functions	X/Open extensions	C++ TR1	definition alternative names with type letters are generally not shown	Allen Wirfs-Brock 2/23/2011
isNaN(x) isFinite(x)	TBD	http://www.dinkum.com/	http://www.open-std.org/jtc1/sc22/wg21/docs/papers/2009/0145r1.pdf	http://pubs.opengroup.org/onlinepubs/9696911111/basedefs/math_def.html	http://www.open-std.org/jtc1/sc22/wg21/docs/papers/2009/0145r1.pdf		
			isnan(x) isfinite(x) isinf(x) isnormal(x) isgreater(x,y) isgreaterequal(x,y) isless(x,y) islessequal(x,y) islessequalorless(x,y) isunordered(x,y)			is normalized and finite x*y ? 1 : 0 x==y ? 1 : 0 x<y ? 1 : 0 x==y ? 1 : 0 (x<y x>y) ? 1 : 0 (isNaN(x) isNaN(y)) ? 1 : 0	
Number.MAX_VALUE Number.MIN_VALUE Number.NaN Number.NEGATIVE_INFINITY Number.POSITIVE_INFINITY		M_E M_LN10 M_LN2 M_LOG2E M_LOG10E M_PI M_PI_2 M_PI_4 M_1_PI M_2_PI M_2_SQRTPI M_SQRT1_2 M_SQRT2					
Math.E Math.LN10 Math.LN2 Math.LOG2E Math.LOG10E Math.PI		M_E M_LN10 M_LN2 M_LOG2E M_LOG10E M_PI M_PI_2 M_PI_4 M_1_PI M_2_PI M_2_SQRTPI M_SQRT1_2 M_SQRT2		Not Included		pi/2 pi/4 1/pi 2/pi 2/sqrt(pi)	
Math.SQRT1_2 Math.SQRT2		M_SQRT1_2 M_SQRT2				valued return by some functions on range error	
		HUGE_VAL	INFINITY NAN fpclassify(x) signbit(x)			returns an integer code classify x as infinite, NaN, normal, subnormal, zero 1 if x is negative, 0 otherwise (including NaN)	
Math.abs(x) Math.acos(x) Math.asin(x) Math.atan(x) Math.atan2(y,x) Math.ceil(x) Math.cos(x) Math.exp(x) Math.floor(x) % operator		fabs(x); abs(x), c++ acos(x) asin(x) atan(x) atan2(y,x) ceil(x) cos(x) exp(x) floor(x) fmod(num, denom) fexp(x,exp) ldexp(x,exp)				extract mantissa and exponent x*pow(2,exp)	
Math.log(x)		log(x) log10(x)	log1p(x) log2(x) fmax(x,y) fmin(x,y)			log(1+x) log2(x) max(x,y) min(x,y)	
Math.max(v1,v2,...) Math.min(v1,v2,...)		modf(x,'int') pow(x,y)				decompose number into integer and fraction parts	
Math.pow(x,y) Math.random()			round(x);llround(x)			round, x.5 rounds away from zero ignoring current rounding mode; int result	
			lrint(x);llrint(x) rint(x) round			round using current rounding mode, int result round using current mode, float result round, x.5 rounds away from zero; float result	ath
Math.round(x) Math.sin(x) Math.sqrt(x) Math.tan(x)		sin(x) sqrt(x) tan(x) cosh(x) sinh(x) tanh(x)					
			acos(x) asinh(x) atanh(x) cbrt(x) copysign(x,y) erf(x) erfc(x) exp2(x) expm(x) fgm(x,y) fma(x,y,z) hypot(x,y) ilogb(x); logb(x) lgamma(x) nan(x) nearbyint(x)			cube root set sign of x to sign of y error function of x complementary error function power(2,x) exp(x)-1 max(x,y,D) (x^y)+z hypotenuse: sqrt(pow(x,2)+pow(y,2)) exponent of the floating point number log(abs(gamma(x))) create a NaN based upon string argument round to nearest integer using current rounding mode, no exceptions, overflow produces HUGE_VAL	E
			nextafter(x,y) nexttowards(x,y) remainder(x,y) remquo(x,y,'q') scaleb(x,n);scalebin(x,n) tgamma(x) trunc(x,n)	scalb(x,y)		next representable value after x towards y same as nextafter except y is extended precision remainder as defined by iec 60559 returns remainder, and stores quotient x*pow(FLT_RADIX,n); n is y for scalb gamma function truncate number to an integer Bessel function of x of the first kind of order 0 Bessel function of x of the first kind of order 1 Bessel function of x of the first kind of order n Bessel function of x of the second kind of order 0 Bessel function of x of the second kind of order 1 Bessel function of x of the second kind of order n associated Laguerre polynomial associated Legendre polynomial beta(x,y) complete elliptic integral of the first kind of k complete elliptic integral of the second kind of k complete elliptic integral of the third kind of k regular modified cylindrical Bessel function cylindrical Bessel function irregular modified cylindrical Bessel function cylindrical Neumann function incomplete elliptic integral of the first kind incomplete elliptic integral of the second kind incomplete elliptic integral of the third kind exponential integral of x Hermite polynomial of n and x Laguerre polynomial of n and x Legendre polynomial of n and x spherical Bessel function of the first kind of n and x spherical associated Legendre function spherical Neumann function	