**[math](https://docs.pycom.io/pycom_esp32/library/math.html" \l "module-math" \o "math: mathematical functions) – mathematical functions**

The math module provides some basic mathematical functions for working with floating-point numbers.

Availability: not available on WiPy 1.0. Floating point support required for this module.

**Functions**

**math.acos(*x*)**

Return the inverse cosine of **x**.

**math.acosh(*x*)**

Return the inverse hyperbolic cosine of **x**.

**math.asin(*x*)**

Return the inverse sine of **x**.

**math.asinh(*x*)**

Return the inverse hyperbolic sine of **x**.

**math.atan(*x*)**

Return the inverse tangent of **x**.

**math.atan2(*y*, *x*)**

Return the principal value of the inverse tangent of **y/x**.

**math.atanh(*x*)**

Return the inverse hyperbolic tangent of **x**.

**math.ceil(*x*)**

Return an integer, being **x** rounded towards positive infinity.

**math.copysign(*x*, *y*)**

Return **x** with the sign of **y**.

**math.cos(*x*)**

Return the cosine of **x**.

**math.cosh(*x*)**

Return the hyperbolic cosine of **x**.

**math.degrees(*x*)**

Return radians **x** converted to degrees.

**math.erf(*x*)**

Return the error function of **x**.

**math.erfc(*x*)**

Return the complementary error function of **x**.

**math.exp(*x*)**

Return the exponential of **x**.

**math.expm1(*x*)**

Return **exp(x) - 1**.

**math.fabs(*x*)**

Return the absolute value of **x**.

**math.floor(*x*)**

Return an integer, being **x** rounded towards negative infinity.

**math.fmod(*x*, *y*)**

Return the remainder of **x/y**.

**math.frexp(*x*)**

Decomposes a floating-point number into its mantissa and exponent. The returned value is the tuple **(m, e)** such that **x == m \* 2\*\*e** exactly. If **x == 0** then the function returns **(0.0, 0)**, otherwise the relation **0.5 <= abs(m) < 1** holds.

**math.gamma(*x*)**

Return the gamma function of **x**.

**math.isfinite(*x*)**

Return **True** if **x** is finite.

**math.isinf(*x*)**

Return **True** if **x** is infinite.

**math.isnan(*x*)**

Return **True** if **x** is not-a-number

**math.ldexp(*x*, *exp*)**

Return **x \* (2\*\*exp)**.

**math.lgamma(*x*)**

Return the natural logarithm of the gamma function of **x**.

**math.log(*x*)**

Return the natural logarithm of **x**.

**math.log10(*x*)**

Return the base-10 logarithm of **x**.

**math.log2(*x*)**

Return the base-2 logarithm of **x**.

**math.modf(*x*)**

Return a tuple of two floats, being the fractional and integral parts of **x**. Both return values have the same sign as **x**.

**math.pow(*x*, *y*)**

Returns **x** to the power of **y**.

**math.radians(*x*)**

Return degrees **x** converted to radians.

**math.sin(*x*)**

Return the sine of **x**.

**math.sinh(*x*)**

Return the hyperbolic sine of **x**.

**math.sqrt(*x*)**

Return the square root of **x**.

**math.tan(*x*)**

Return the tangent of **x**.

**math.tanh(*x*)**

Return the hyperbolic tangent of **x**.

**math.trunc(*x*)**

Return an integer, being **x** rounded towards 0.

**Constants**

**math.e**

base of the natural logarithm

**math.pi**

the ratio of a circle’s circumference to its diameter