

## What is math module in Python?

The math module is a standard module in Python and is always available. To use mathematical functions under this module, you have to import the module using `import math`.

```
# Square root calculation
```

```
import math
```

```
math.sqrt(4)
```

This module does not support complex datatypes. The `cmath` module is the complex counterpart.

## Functions in Python Math Module

Here is the list of all the functions and attributes defined in math module with a brief explanation of what they do.

Function	Description
<code>ceil(x)</code>	Returns the smallest integer greater than or equal to x.
<code>copysign(x, y)</code>	Returns x with the sign of y
<code>fabs(x)</code>	Returns the absolute value of x
<code>factorial(x)</code>	Returns the factorial of x
<code>floor(x)</code>	Returns the largest integer less than or equal to x
<code>fmod(x, y)</code>	Returns the remainder when x is divided by y
<code>frexp(x)</code>	Returns the mantissa and exponent of x as the pair (m, e)
<code>fsum(iterable)</code>	Returns an accurate floating point sum of values in the iterable

isfinite(x)	Returns True if x is neither an infinity nor a NaN (Not a Number)
isinf(x)	Returns True if x is a positive or negative infinity
isnan(x)	Returns True if x is a NaN
ldexp(x, i)	Returns $x * (2^{**i})$
modf(x)	Returns the fractional and integer parts of x
trunc(x)	Returns the truncated integer value of x
exp(x)	Returns $e^{**x}$
expm1(x)	Returns $e^{**x} - 1$
log(x[, base])	Returns the logarithm of x to the base (defaults to e)
log1p(x)	Returns the natural logarithm of 1+x
log2(x)	Returns the base-2 logarithm of x
log10(x)	Returns the base-10 logarithm of x
pow(x, y)	Returns x raised to the power y
sqrt(x)	Returns the square root of x
acos(x)	Returns the arc cosine of x
asin(x)	Returns the arc sine of x
atan(x)	Returns the arc tangent of x

atan2(y, x)	Returns atan(y / x)
cos(x)	Returns the cosine of x
hypot(x, y)	Returns the Euclidean norm, $\sqrt{x^2 + y^2}$
sin(x)	Returns the sine of x
tan(x)	Returns the tangent of x
degrees(x)	Converts angle x from radians to degrees
radians(x)	Converts angle x from degrees to radians
acosh(x)	Returns the inverse hyperbolic cosine of x
asinh(x)	Returns the inverse hyperbolic sine of x
atanh(x)	Returns the inverse hyperbolic tangent of x
cosh(x)	Returns the hyperbolic cosine of x
sinh(x)	Returns the hyperbolic sine of x
tanh(x)	Returns the hyperbolic tangent of x
pi	mathematical constant $\pi$ (3.14159...)
e	mathematical constant e (2.71828...)

