Python Math ❯

Python has a set of built-in math functions, including an extensive math module, that allows you to perform mathematical tasks on numbers.

Built-in Math Functions

**The min() and max() functions can be used to find the lowest or highest value in an iterable:**

Example

x = min(5, 10, 25)  
y = max(5, 10, 25)  
print(x)  
print(y)

or

x = [5, 10, 25]

y = (5, 10, 25)

print(min(x))

print(max(y))

**The abs() function returns the absolute (positive) value of the specified number:**

Example

x = abs(-7.25)  
print(x)

**The pow(*x*, *y*) function returns the value of x to the power of y (xy).**

Example

Return the value of 4 to the power of 3 (same as 4 \* 4 \* 4):

x = pow(4, 3)  
print(x)

The Math Module

Python has also a built-in module called math, which extends the list of mathematical functions.

To use it, you must import the math module:

import math

When you have imported the math module, you can start using methods and constants of the module.

**The math.sqrt() method for example, returns the square root of a number:**

Example

import math  
x = math.sqrt(64)  
print(x) # it returns floating number

**The math.ceil() method rounds a number upwards to its nearest integer, and the math.floor() method rounds a number downwards to its nearest integer, and returns the result:**

Example

#Import math library

import math

#Round a number upward to its nearest integer

x = math.ceil(1.7)

#Round a number downward to its nearest integer

y = math.floor(1.7)

print(x)

print(y)

**The math.pi constant, returns the value of PI (3.141...):**

Example

import math  
x = math.pi  
print(x)