Python Math

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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)
```

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

Example

```
x = abs(-7.25)

print(x)
```

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The `pow(x, y)` function returns the value of x to the power of y (x^y).

Example

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

```
x = pow(4, 3)

print(x)
```

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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)
```

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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

x = math.ceil(1.4)
y = math.floor(1.4)

print(x) # returns 2
print(y) # returns 1
```

Try it Yourself »

The `math.pi` constant, returns the value of PI (3.14...):

Example

```
import math

x = math.pi

print(x)
```

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Complete Math Module Reference

In our Math Module Reference you will find a complete reference of all methods and constants that belongs to the Math module.

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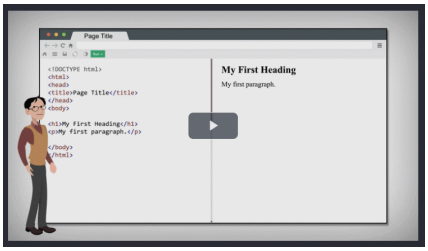

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