

Python Numbers

There are three numeric types in Python:

- int
- float
- complex

Variables of numeric types are created when you assign a value to them:

```
x = 1  # int
y = 2.8  # float
z = 1j  # complex
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```

To verify the type of any object in Python, use the type() function:

```
print(type(x))
print(type(y))
print(type(z))
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```

Int

Int, or integer, is a whole number, positive or negative, without decimals, of unlimited length.

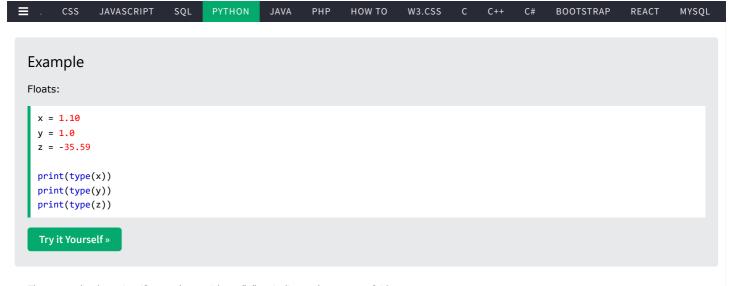
```
Example
Integers:

x = 1
y = 35656222554887711
z = -3255522

print(type(x))
print(type(y))
print(type(z))
```

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Float can also be scientific numbers with an "e" to indicate the power of 10.

```
Example
```

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```
Floats:
```

```
x = 35e3
y = 12E4
z = -87.7e100

print(type(x))
print(type(y))
print(type(z))
```

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Complex

Complex numbers are written with a "j" as the imaginary part:

```
Example
```

```
Complex:
```

```
x = 3+5j
y = 5j
z = -5j

print(type(x))
print(type(y))
```

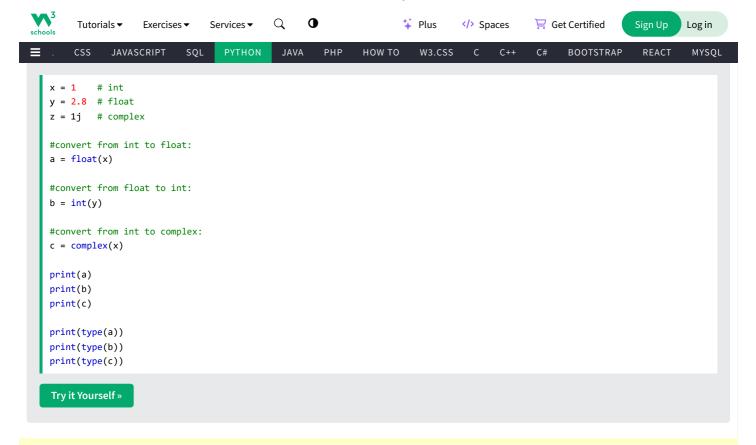
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print(type(z))

Type Conversion



You can convert from one type to another with the int(), float(), and complex() methods:



Note: You cannot convert complex numbers into another number type.

Random Number

Python does not have a random() function to make a random number, but Python has a built-in module called random that can be used to make random numbers:

Example

Import the random module, and display a random number between 1 and 9:

```
import random
print(random.randrange(1, 10))
```

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In our $\underline{\sf Random\ Module\ Reference}$ you will learn more about the Random module.

Test Yourself With Exercises

Exercise:

Insert the correct syntax to convert x into a floating point number.

x = 5

