



Python Operators

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Python Operators

Operators are used to perform operations on variables and values.

Python divides the operators in the following groups:

- Arithmetic operators
- Assignment operators
- Comparison operators
- Logical operators
- Identity operators
- Membership operators
- Bitwise operators

Python Arithmetic Operators

Arithmetic operators are used with numeric values to perform common mathematical operations:

Operator	Name	Example	Try it
+	Addition	x + y	Try it »



*	Multiplication	<code>x * y</code>	Try it »
/	Division	<code>x / y</code>	Try it »
%	Modulus	<code>x % y</code>	Try it »
**	Exponentiation	<code>x ** y</code>	Try it »
//	Floor division	<code>x // y</code>	Try it »

Python Assignment Operators

Assignment operators are used to assign values to variables:

Operator	Example	Same As	Try it
=	<code>x = 5</code>	<code>x = 5</code>	Try it »
+=	<code>x += 3</code>	<code>x = x + 3</code>	Try it »
-=	<code>x -= 3</code>	<code>x = x - 3</code>	Try it »
*=	<code>x *= 3</code>	<code>x = x * 3</code>	Try it »
/=	<code>x /= 3</code>	<code>x = x / 3</code>	Try it »
%=	<code>x %= 3</code>	<code>x = x % 3</code>	Try it »
//=	<code>x //= 3</code>	<code>x = x // 3</code>	Try it »
**=	<code>x **= 3</code>	<code>x = x ** 3</code>	Try it »
&=	<code>x &= 3</code>	<code>x = x & 3</code>	Try it »
=	<code>x = 3</code>	<code>x = x 3</code>	Try it »
^=	<code>x ^= 3</code>	<code>x = x ^ 3</code>	Try it »
>>=	<code>x >>= 3</code>	<code>x = x >> 3</code>	Try it »
<<=	<code>x <<= 3</code>	<code>x = x << 3</code>	Try it »



Python Comparison Operators

Comparison operators are used to compare two values:

Operator	Name	Example	Try it
==	Equal	x == y	Try it »
!=	Not equal	x != y	Try it »
>	Greater than	x > y	Try it »
<	Less than	x < y	Try it »
>=	Greater than or equal to	x >= y	Try it »
<=	Less than or equal to	x <= y	Try it »

Python Logical Operators

Logical operators are used to combine conditional statements:

Operator	Description	Example	Try it
and	Returns True if both statements are true	x < 5 and x < 10	Try it »
or	Returns True if one of the statements is true	x < 5 or x < 4	Try it »
not	Reverse the result, returns False if the result is true	not(x < 5 and x < 10)	Try it »

Python Identity Operators



Operator	Description	Example	Try it
is	Returns True if both variables are the same object	x is y	Try it »
is not	Returns True if both variables are not the same object	x is not y	Try it »

Python Membership Operators

Membership operators are used to test if a sequence is presented in an object:

Operator	Description	Example	Try it
in	Returns True if a sequence with the specified value is present in the object	x in y	Try it »
not in	Returns True if a sequence with the specified value is not present in the object	x not in y	Try it »

Python Bitwise Operators

Bitwise operators are used to compare (binary) numbers:

Operator	Name	Description
&	AND	Sets each bit to 1 if both bits are 1
	OR	Sets each bit to 1 if one of two bits is 1
^	XOR	Sets each bit to 1 if only one of two bits is 1
~	NOT	Inverts all the bits



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>>

Signed
right shift

Shift right by pushing copies of the leftmost bit in from the left, and let the rightmost bits fall off

Test Yourself With Exercises

Exercise:

Multiply **10** with **5** , and print the result.

```
print(10    5)
```

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