

# 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

## Python Arithmetic Operators

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

Operator	Name
+	Addition
-	Subtraction
*	Multiplication
/	Division
%	Modulus

### Example

```
x = int(input("enter first number"))
y = int(input("enter second number"))
print(x + y)
print(x - y)
print(x * y)
print(x / y )
print(x % y)
```

## Python Assignment Operators

Assignment operators are used to assign values to variables:

Operator	Example	Same as
=	x = 5	x = 5
+=	x += 3	x = x + 3

<b>-=</b>	<b>x -= 3</b>	<b>x = x - 3</b>
<b>*=</b>	<b>x *= 3</b>	<b>x = x * 3</b>
<b>/=</b>	<b>x /= 3</b>	<b>x = x / 3</b>
<b>%=</b>	<b>x %= 3</b>	<b>x = x % 3</b>

## Example

```
a = 5  
a += 3  
print(a)
```

```
b = 5  
b -= 3  
print(b)
```

```
c = 5  
c *= 3  
print(c)
```

```
d = 5  
d /= 3  
print(d)
```

```
e = 5  
e %= 3  
print(e)
```

## Python Comparison Operators

Comparison operators are used to compare two values:

<b>Operator</b>	<b>Name</b>	<b>Example</b>
<b>==</b>	<b>Equal</b>	<b>x == y</b>
<b>!=</b>	<b>Not equal</b>	<b>x != y</b>
<b>&gt;</b>	<b>Greater than</b>	<b>x &gt; y</b>
<b>&lt;</b>	<b>Less than</b>	<b>x &lt; y</b>
<b>&gt;=</b>	<b>Greater than or equal to</b>	<b>x &gt;= y</b>
<b>&lt;=</b>	<b>Less than or equal to</b>	<b>x &lt;= y</b>

## Example

```
x = int(input("enter first number"))
y = int(input("enter second number"))
print(x == y)
print(x != y)
print(x > y)
print(x < y)
print(x >= y)
print(x <= y)
```

## Python Logical Operators

Logical operators are used to combine conditional statements:

Operator	Description
and	Returns True if both statements are true
or	Returns True if one of the statements is true
not	Reverse the result, returns False if the result is true

## Example

```
x = 5
print(x > 3 and x < 10)
# returns True because 5 is greater than 3 AND 5 is less than 10

print(x > 3 or x < 4)
# returns True because one of the conditions are true (5 is greater than 3, but 5 is not less than 4)

print(not(x > 3 and x < 10))
# returns False because not is used to reverse the result
```