ARITHMETIC OPERATORS

PYTHON BASICS

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TOPIC OUTLINE

Addition

Subtraction

Multiplication

Division

Modulo

Increment

Decrement

ARITHMETIC OPERATORS

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Arithmetic operators are used to perform **basic mathematical operations** on numeric values. These operators are fundamental to performing calculations and manipulating data in programs.

Unary Operators operates with a single operand (e.g., `~`, `not`).

Binary Operators operates with two operands (e.g., `+`, `-`, `*`, `%`).

ADDITION

Example:

```
a = 5

b = 3

a + b

# output = 8
```

The addition **(+)** operator **adds** two operands.

SUBTRACTION

The subtraction `(-)` operator **subtracts** the second operand from the first.

Example:

```
a = 10

b = 4

a - b

# output = 6
```

MULTIPLICATION

The multiplication `(*)` operator **multiplies** two operands.

Example:

```
a = 7

b = 6

a * b

# output = 42
```

DIVISION

The division `(/)` operator **divides** the first operand by the second.

Example:

```
a = 10

b = 3

a / b

# output = 3.333
```

FLOOR DIVISION

For **positive numbers,** floor division `(//)` behaves like normal division but discards the fractional part.

For **negative numbers**, floor division rounds toward negative infinity.

Example:

```
a = 10
b = 3
a // b
# output = 3
```

```
a = 10
b = -3
a // b
# output = -4
```

MODULO

The modulo `(%)` operator returns the **remainder** of the division of the first operand by the second.

Example:

```
a = 10

b = 3

a % b

# output = 1
```

INCREMENT

Example:

```
x = 5

x+=1

# x = 6
```

The increment **(+=)** operator **increases** the value of a variable by a specified amount.

DECREMENT

Example:

```
x = 5

x-=1

# x = 4
```

The decrement `(-=)` operator **decreases** the value of a variable by a specified amount.

LABORATORY