Python Operators:

Arithmetic Operators

These are used for basic mathematical operations:

- `+` (Addition)
- `-` (Subtraction)
- `*` (Multiplication)
- `/` (Division)
- `%` (Modulus)
- `**` (Exponentiation)
- `//` (Floor division)

Comparison (Relational) Operators

These compare two values:

- `==` (Equal)
- `!=` (Not equal)
- `>` (Greater than)
- `<` (Less than)
- `>=` (Greater than or equal to)
- `<=` (Less than or equal to)

Assignment Operators

These assign values to variables:

- `=` (Assign)
- `+=` (Add and assign)
- `-=` (Subtract and assign)
- `*=` (Multiply and assign)
- `/=` (Divide and assign)
- `%=` (Modulus and assign)
- `**=` (Exponentiation and assign)
- `//=` (Floor division and assign)

Logical Operators

These are used to combine conditional statements:

- `and` (Returns True if both statements are true)
- `or` (Returns True if one of the statements is true)
- `not` (Reverses the result)

Bitwise Operators

These work on bits and perform bit-by-bit operations:

- `&` (AND)
- `|` (OR)
- `^` (XOR)
- `~` (NOT)
- `<<` (Left shift)
- `>>` (Right shift)

Membership Operators

These test if a sequence contains an object:

- `in` (True if the value is found in the sequence)
- `not in` (True if the value is not found in the sequence)

Identity Operators

These compare the memory location of two objects:

- `is` (True if both variables point to the same object)
- `is not` (True if both variables do not point to the same object)