Python Operators

1. Arithmetic Operators
2. Comparison (Relational) Operators
3. Logical operators
4. Assignment Operators
5. Bitwise Operators
6. Membership operators
7. identity operators

1. Arithmetic Operators : (Based on mathematical operatio

→ Addition → + (10 + 5 = 15)

→ Subtraction → - (10 - 5 = 5)

→ Multiplication → * (10 * 5 = 50)

→ Division (float) → / (10/3 = 3.333)

→ Floor Division (quotient only) → // (10//3 = 3)

→ Modulus (Remainder) → % (10 % 3) = 1

→ Exponentiation (power) → ** (2 ** 3) = 8

2. Comparison (Relational operators) :- (used to Compare two

→ Equal to → == (5 == 5 (true))

→ Not equal to → != (5 != 3 (True))

→ Greather than → > (10 > 5 (true))

→ Less than → < (10 < 5 false))

→ Greather than or equal → >= (10 >= 10 (true))

→ Less than or equal → <= (5<=10 (True))

3. Logical operators : (used for conditional logic)

→ True if both are true → and (5>2 and 10>9 (true))

→ True if atleast one is true → are (5>10 or 10>3(true))

→ Negates the result → not (not(5>2)) (false).

4. Assignment operators : (used to assign values to varaibles)

→ Assign → = (x=5) (-,

→ Add and assign → += (x+=3) (x=x+3)

→ Subtract and assign → -= (x-=2) (x=x-2)

→ Multiply and assign → *= (x*=4) (x=x*4)

→ Divide and assign → /= (x/=2) (x=x/2)

→ Floor divide and assign → //= (x//=2) (x=x//2)

→ Modules and assign → %= (x%=3) (x=x%=3)

→ Power and assign → **=(x**=2) (x=x**2)

5. Bitwise operators : (works on binary numbers (0s & 1s)

		input	output
→ AND	→ &	(5&3)	1 (0101 & 0011 = 0001)
→ OR	→ |	(|5)	(|5)
→ XOR	→ ^	(5^3)	6 (0101 ^ 0011 = 0110)
→ NOT	→ ~	(~5)	(-6)
→ Left shift	→ <<	(5<<1)	(10)
→ Right shift	→ >>	(5>>1)	(2)

6. Membership operators (used to check if value is in sequence like string, list etc....)

→ True if value exist → in ('a' in 'apple') (true)

→ True if value does not exist → not in ('b' not in 'apple') (True)

7. Identity operators (To used to compare memore location of objects).

→ True if both refer to same object → is (x is y) (true/false)

→ True if not same object → is not (x is not y) (true/false)