PYTHON NOTES: ARITHMETIC OPERATORS

WHAT ARE ARITHMETIC OPERATORS?

Arithmetic operators are used to perform mathematical operations on numbers in Python.

Python treats numeric values as either:

- **int** → whole numbers (ex: 10)
- **float** → decimal numbers (ex: 5.6)

LIST OF ARITHMETIC OPERATORS IN PYTHON

Operator	Symbol	Example	Meaning
Addition	+	5 + 3 → 8	Adds values
Subtraction	-	9 - 4 → 5	Subtracts values
Multiplication	*	6 * 4 → 24	Multiplies values
Division	/	9 / 2 → 4.5	Normal division (result always float)
Floor Division	//	9 // 2 → 4	Division but removes decimal part
Modulus	%	9 % 2 → 1	Gives remainder
Exponent	**	2 ** 3 → 8	Power (x to the power y)

EXAMPLES IN PYTHON

```
a = 10
b = 3

print(a + b)   # Addition
print(a - b)   # Subtraction
print(a * b)   # Multiplication
print(a / b)   # Division
```

```
print(a // b)  # Floor division
print(a % b)   # Modulus
print(a ** b)  # Exponent
```

IMPORTANT NOTES

- 10 / 2 → 5.0 (float)
- 10 // 2 → 5 (integer)
- x % y tells if a number is even or odd:
  - num % 2 == 0 → even
  - num % 2 == 1 → odd
- Exponent (**) is used for:
  - Square → num ** 2
  - Cube → num ** 3

PRACTICAL USES

Use	Operator
Calculating bill, salary	+ - * /
Checking even/odd	%
Getting last digit of number	% 10
Power calculations (square, cube, formulas)	**
Removing decimals (like age, floors)	//