OPERATORS

PEDNEKARSHRIDDHESH010@GMAIL.COM

SHRADDHESH-08
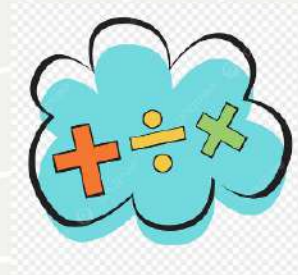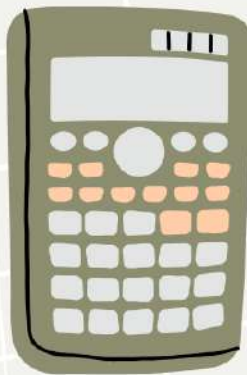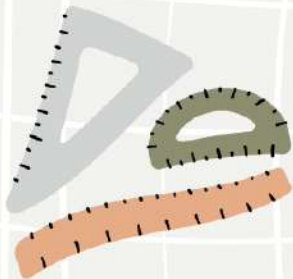
OPERATOR :-

An operator is a symbol that tells the computer to do some work — like adding, comparing, or checking values.

◆ TYPES OF OPERATORS IN JAVA

1. Arithmetic Operators
2. Assignment Operators
3. Relational Operators
4. Logical Operators
5. Unary Operators
6. Ternary Operator
7. Bitwise Operators
8. Special Operators

◆ ARITHMETIC OPERATORS

Used for mathematical calculations.

OPERATOR	MEANING	EXAMPLE	RESULT
+	ADDITION	10 + 5	15
-	SUBTRACTION	10 - 5	5
*	MULTIPLICATION	10 * 5	50
/	DIVISION	10 / 5	2
%	MODULUS (REMAINDER)	10 % 3	1

◆ 2. ASSIGNMENT OPERATORS
Used to assign values to variables.

OPERATOR	MEANING	EXAMPLE	EQUIVALENT
=	ASSIGN	A = 5	A = 5
+=	ADD AND ASSIGN	A += 3	A = A + 3
-=	SUBTRACT AND ASSIGN	A -= 3	A = A - 3
*=	MULTIPLY AND ASSIGN	A *= 3	A = A * 3
/=	DIVIDE AND ASSIGN	A /= 3	A = A / 3
%=	MODULUS AND ASSIGN	A %= 3	A = A % 3

◆ 3. RELATIONAL OPERATORS
Used to compare two values.

OPERATOR	MEANING	EXAMPLE	RESULT
==	EQUAL TO	5 == 5	TRUE
!=	NOT EQUAL TO	5 != 4	TRUE

>	GREATER THAN	7 > 4	TRUE
<	LESS THAN	3 < 8	TRUE
>=	GREATER THAN OR EQUAL TO	5 >= 5	TRUE
<=	LESS THAN OR EQUAL TO	4 <= 6	TRUE

4. LOGICAL OPERATORS
Used to combine multiple conditions

OPERATOR	MEANING	EXAMPLE	RESULT
&&	AND (BOTH MUST BE TRUE)	(A > 5 && B < 10)	TRUE IF BOTH ARE TRUE
||			OR (ANY ONE TRUE IS ENOUGH)
!	NOT (REVERSES RESULT)	!(A > 5)	TRUE → FALSE

◆ 5. INCREMENT OR DECREMENT

Used with only one operand.

OPERATOR	MEANING
++	INCREMENT BY 1
_ _	DECREMENT BY 1

◆ 6. TERNARY OPERATOR

Used as a short form of if-else condition.

result = (condition) ? value_if_true : value_if_false;
Example: int max = (a > b) ? a : b;

◆ 7. Bitwise Operators

Used for bit-level operations (binary operations).

Operator	Meaning	Example
&	Bitwise AND	a & b
`	`	Bitwise OR
^	Bitwise XOR	a ^ b

~	Bitwise NOT	~a
<<	Left Shift	a << 2
>>	Right Shift	a >> 2