

## Operators in Java

Operator is a special symbol that tells the compiler to perform specific mathematical or logical Operation. Java supports following lists of operators.

- Arithmetic Operators
- Relational Operators
- Logical Operators
- Bitwise Operators
- Assignment Operators
- Ternary or Conditional Operators

	Operator	Type
unary operator →	++, --	Unary operator
Binary operator {	+, -, *, /, %	Arithmetic operator
	<, <=, >, >=, ==, !=	Relational operator
	&&,   , !	Logical operator
	&,  , <<, >>, ~, ^	Bitwise operator
	=, +=, -=, *=, /=, %=	Assignment operator
Ternary operator →	?:	Ternary or conditional operator

### Arithmetic Operators

Given table shows the entire Arithmetic operator supported by Java Language. Let's suppose variable A hold 8 and B hold 3.

Operator	Example (int A=8, B=3)	Result
+	A+B	11
-	A-B	5
*	A*B	24
/	A/B	2
%	A%4	0

### Relational Operators

Which can be used to check the Condition, it always returns true or false. Let's suppose variable A hold 8 and B hold 3.

Operators	Example (int A=8, B=3)	Result
<	A<B	False
<=	A<=10	True
>	A>B	True
>=	A<=B	False
==	A== B	False
!=	A!=(-4)	True

### Logical Operators

Which can be used to combine more than one Condition? Suppose you want to combined two conditions A<B and B>C, then you need to use Logical Operator like (A<B) && (B>C). Here && is Logical Operator.

Operator	Example (int A=8, B=3, C=-10)	Result
&&	(A<B) && (B>C)	False
!	!(B<=-A)	True
	(B!=-C)    (A==B)	True

Truth table of Logical Operator

C1	C2	C1 && C2	C1    C2	!C1	!C2
T	T	T	T	F	F
T	F	F	T	F	T
F	T	F	T	T	F
F	F	F	F	T	T

Assignment operators

Which can be used to assign a value to a variable? Let's suppose variable A hold 8 and B hold 3.

Operator	Example (int A=8, B=3)	Result
+=	A+=B or A=A+B	11
-=	A-=3 or A=A-3	5
*=	A*=7 or A=A*7	56
/=	A/=B or A=A/B	2
%=	A%=5 or A=A%5	3
=a=b	Value of b will be assigned to a	

Ternary operator

If any operator is used on three operands or variable is known as ternary operator. It can be represented with

