**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

**Arithmetic Operators**

Given table shows all the Arithmetic operator supported by Java Language. Lets 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 return true or false. Lets 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 Operator**

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!=-C) || (A==B) | True |
| ! | !(B<=-A) | 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. Lets 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 " ?: "

Ternary operator Read in detail[Read in detail](http://www.sitesbay.com/C/Ternary-Operator)