

Java Operators

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Priority	Operator	Name	Associativity	Example	Result*	Incidents per 100 Lines
1	++	Increment	r	x++	3.5 (+ effect)	.77
				++x	4.5 (+ effect)	
	--	Decrement	r	x--	3.5 (+ effect)	.09
				--x	2.5 (+ effect)	
	+	Unary plus	r	+x	3.5	?
				-	Unary minus	
	!	Logical complement	r	isOpen	false	.28
~	Bitwise complement	r	~i	-5	.01	
(type)	Cast	r	i = (int) x	3	?	
2	*	Multiplication	l	x * 2	7.	1.24
	/	Division	l	x / 2	1.75	.22
	%	Remainder	l	x % 2	1.5	.04
3	+	Binary plus	l	x + 2	5.5	(2.70)
				" " + x + i	" 3.54"	
-	Binary minus	l	x - i	-0.5	(1.46)	
4	<<	Shift left	l	i << 2	16	.08
	>>	Shift right	l	-i >> 2	-1	.04
	>>>	Shift right ignore sign	l	-i >>> 2	1073741823	.02
5	>	greater than	l	i > x	true	.36
	<	lesser than	l	i < x	false	.86
	>=	greater equal	l	i >= x	true	.14
	<=	lesser equal	l	i <= x	false	.24
	instanceof	Type check	l	s instanceof String	true	.25

*Results are given for the declarations: int i=4, int j=2, double x = 3.5, String s="", boolean isOpen=true.

Priority	Operator	Name	Associativity	Example	Result*	Incidents per 100 Lines
6	==	Equals	l	i == j	false	1.28
				s == ""	true	
6	!=	Not equal	l	i != j	true	1.17
				s != null	true	
7	&	Bitwise and	l	i & j	0	.18
8	^	Exclusive or	l	i ^ 5	1	.01
9		Bitwise or	l	i j	6	.10
10	&&	Logical and	l	isOpen && false	false	.58
11		Logical or	l	isOpen false	true	.33
12	?:	Conditional	r	i<0 ? -1 : 1	1	.20
13	=	Assignment	r	j = i o = s;	4 (+ effect) " " (+ effect)	9.68
	+=	Plus assignment	r	j += x	5 (+ effect)	.27
	-=	Minus assignment	r	j -= x	-1 (+ effect)	.09
	*=	Multiplication assign.	r	j *= x	7 (+ effect)	.02
	/=	Division assign.	r	j /= x	0 (+ effect)	0
	&=	Bitwise and assign.	r	j &= i	0 (+ effect)	.01
	=	Bitwise or assign.	r	j = i	6 (+ effect)	.03
	^=	Exclusive or assign.	r	j ^= i	6 (+ effect)	0
	%=	Remainder assign.	r	j %= i	1 (+ effect)	0
	<<=	Shift left assign.	r	j <<= i	32 (+ effect)	0
	>>=	Shift right assign.	r	j >>= i	0 (+ effect)	0
	>>>=	Shift right i.s. assign.	r	j >>>= i	0 (+ effect)	0