# Java Operator Precedence Table

| Operator | Description | Associativity |
|---|---|---|
| `()`<br>`[]`<br>`.` | method invocation<br>array subscript<br>member access/selection | left-to-right |
| `++`<br>`--` | unary postfix increment<br>unary postfix decrement | right-to-left |
| `++`<br>`--`<br>`+`<br>`-`<br>`!`<br>`~`<br>`( type )`<br>`new` | unary prefix increment<br>unary prefix decrement<br>unary plus<br>unary minus<br>unary logical negation<br>unary bitwise complement<br>unary cast<br>object creation | right-to-left |
| `*`<br>`/`<br>`%` | multiplication<br>division<br>modulus (remainder) | left-to-right |
| `+`<br>`-` | addition or string concatenation<br>subtraction | left-to-right |
| `<<`<br>`>>`<br>`>>>` | left shift<br>arithmetic/signed right shift (sign bit duplicated)<br>logical/unsigned right shift (zero shifted in) | left-to-right |
| `<`<br>`<=`<br>`>`<br>`>=`<br>`instanceof` | less than<br>less than or equal to (at most)<br>greater than<br>greater than or equal to (at least)<br>type comparison | left-to-right |
| `==`<br>`!=` | is equal to (equality)<br>is not equal to (inequality) | left-to-right |
| `&` | bitwise AND<br>boolean logical AND (no short-circuiting) | left-to-right |
| `^` | bitwise exclusive OR<br>boolean logical exclusive OR | left-to-right |
| `\|` | bitwise inclusive OR<br>boolean logical inclusive OR (no short-circuiting) | left-to-right |
| `&&` | logical/conditional AND (short-circuiting) | left-to-right |
| `\|\|` | logical/conditional OR (short-circuiting) | left-to-right |
| `?:` | conditional/ternary (if-then-else) | right-to-left |
| `=`<br>`+=`<br>`-=`<br>`*=`<br>`/=`<br>`%=`<br>`&=`<br>`^=`<br>`\|=`<br>`<<=`<br>`>>=`<br>`>>>=` | assignment<br>addition assignment<br>subtraction assignment<br>multiplication assignment<br>division assignment<br>modulus/remainder assignment<br>bitwise AND assignment<br>bitwise exclusive OR assignment<br>bitwise inclusive OR assignment<br>bitwise left shift assignment<br>bitwise arithmetic/signed right shift assignment<br>bitwise logical/unsigned right shift assignment | right-to-left |