## 2-9   Operators, Operands and Expressions

*Definitions*

❑ <u>Operator</u>: something that performs an operation (eg. +, -)
❑ <u>Operand</u>: something that you can perform an operation on. (eg. 73, var, 9.8)
❑ <u>Expression</u>: anything that results in a value usually involving both operators and operands (this is commonly thought of as a calculation (eg. 2+2)

*Operators and precedence*

Java follows a well-defined set of rules for governing what operations should be done first (algebraic order of operations or precedence).

| Precedence | Operator | Operation | # of Operands | example |
|---|---|---|---|---|
| 0 | ( ) | Parenthesize | 1 | (1+2) |
| 1 | + | unary plus | 1 | +1 |
|  | - | unary minus | 1 | -1 |
| 2 | * | Multiplication | 2 | 3 *4 |
|  | / | Division | 2 | 3 /4 |
|  | % | remainder | 2 | 3%4 |
| 3 | + | Addition | 2 | 2 + 3 |
|  | - | Subtraction | 2 | 3 – 2 |
|  | + | String concatenation | 2 | "the" + "dog" |
| 4 | = | Assignment | 2 | Val = 3 |