

$\ll =$ 

Left Shift AND assignment operator

 $\gg =$ 

Right Shift AND assignment operator

 $\& =$ 

Bitwise AND assignment operator

 $\wedge =$ 

Bitwise Exclusive OR and assignment operator

 $\mid =$ 

Bitwise inclusive OR and assignment operator.

### \* Precedence of operators

→ The operators are applied and evaluated based on precedence. For example  $(+, -)$  has less precedence compared to  $(\ast, /)$ . Hence  $\ast \& /$  are evaluated first.

In case we like to change this order, we use parenthesis.

### \* Associativity

→ Associativity tells the direction of execution of operators. It can either be left to right or right to left :  
 1)  $\ast, / \rightarrow L \text{ to } R$   
 2)  $+, - \rightarrow L \text{ to } R$   
 3)  $++, -= \rightarrow R \text{ to } L$

\* Resulting data type after arithmetic operation.

The following table summarizes the resulting data types after arithmetic operation on them.

$$R = b + s \rightarrow \text{int}$$

where,

$$R = s + i \rightarrow \text{int}$$

b  $\rightarrow$  byte f  $\rightarrow$  float

$$R = l + f \rightarrow \text{float}$$

s  $\rightarrow$  short d  $\rightarrow$  double

$$R = i + f \rightarrow \text{float}$$

i  $\rightarrow$  integer l  $\rightarrow$  long

$$R = c + i \rightarrow \text{int}$$

c  $\rightarrow$  character.

$$R = c + s \rightarrow \text{int}$$

$$R = l + d \rightarrow \text{double}$$

$$R = f + d \rightarrow \text{double}$$