Reverse Polish (Postfix) Notation

In this notation the operator symbol is placed after its two operands. For example,

$\rightarrow$ ***To add A to B we can write as AB + or BA +***
$\rightarrow$ ***to subtract D from C we have to write as CD − not as DC −.***

In order to translate an arithmetic expression in infix notation to reverse polish notation, we do step by step using brackets([]) to indicate the partial translation.

Consider the following expression in infix notation:

$$(\boldsymbol{A} - \boldsymbol{B}/\boldsymbol{C}) * (\boldsymbol{A} * \boldsymbol{K} - \boldsymbol{L})$$

the partial translations may look like:

$$= (\boldsymbol{A} - [\boldsymbol{BC}/]) * ([\boldsymbol{AK}\,*] - \boldsymbol{L})$$

$$= [\boldsymbol{ABC}/-] * [\boldsymbol{AK} * \boldsymbol{L}-]$$

$$= \boldsymbol{ABC}/-\boldsymbol{AK} * \boldsymbol{L} -*$$

$\boldsymbol{Example\ 1:\ A + (B * C - (D/E^\wedge F) * G) * H}$

$\boldsymbol{1st\ \ we\ will\ do\ the\ work\ of\ Parenthesis.}$

$\boldsymbol{Next\ \ we\ will\ follow\ the\ precedence\ table}$:

List of Operators In Expression		
Symbol Used	***Operation Performed***	***Precedence***
$^\wedge$(***Caret***)	***Exponent*** (***Power***)	***Highest***
$*$ (***asterisk***)	***Multiplication***	***Highest***
/(***Slash***)	***Division***	***Highest***
%(***percentage***)	***Modulus***(***Remainder***)	***Highest***
+(***Plus***)	***Addition***	***Lowest***
−(***hyphen***)	***Subtraction***	***Lowest***

Highest precedence will be executed first and lowest at last.

$= \boldsymbol{A + (B * C - ([D/EF^\wedge]) * G) * H}$

$= \boldsymbol{A + (B * C - ([DEF^\wedge/]) * G) * H}$

$= \boldsymbol{A + (B * C - [DEF^\wedge/G *]) * H}$

$= \boldsymbol{A + ([BC *] - DEF^\wedge/G *) * H}$

$= \boldsymbol{A + (BC * DEF^\wedge/G * -) * H}$

$= \boldsymbol{A + [BC * DEF^\wedge/G * - H *]}$

$= \boldsymbol{[ABC * DEF^\wedge/G * - H * +]}$

$= \boldsymbol{ABC * DEF^\wedge/G * - H * +}$

$\boldsymbol{Example\ 2:\ A + (B * C - (D/E + F) * G) * H}$

$= \boldsymbol{A + (B * C - ([DE/] + F) * G) * H}$

$= \boldsymbol{A + (B * C - ([DE/F+]) * G) * H}$

$= \boldsymbol{A + (B * C - [DE/F + G *]) * H}$

$= \boldsymbol{A + ([BC *] - DE/F + G *) * H}$

$= \boldsymbol{A + (BC * DE/F + G * -) * H}$

$= \boldsymbol{A + [BC * DE/F + G * -H *]}$

$= \boldsymbol{[ABC * DE/F + G * -H * +]}$

$= \boldsymbol{ABC * DE/F + G * -H * +}$