

- 1) start scanning from left to right
- 2) If(current element is an operand)
Append it to the postfix expression
- 3) Else if (current element is opening bracket '(')
Push it onto the stack
- 4) Else if current element is closing bracket ')'
 - Pop elements from the stack and append them to postfix exp till its corresponding opening brackets does not occur
 - Pop opening brackets from the stack and discard both the brackets
- Else
 - // If(current element is an operator)
 - While(stack is not empty && priority of topmost element \geq priority of current element)
 - {
 - Pop element from the stack and append it to postfix expression
 - }
 - Push current element onto the stack.
- 5) Repeat the above steps till end of infix expression
- 6) Pop all the remaining elements from the stack one by one and append them to postfix expression

Infix expression :

 $5+9-4*(8-6/2)+1*(7-3)$

Current element :

Postfix expression:

stack

top

 $5+9-4*(8-6/2)+1*(7-3)$

()

^

* / %

+ -

$$\begin{array}{l}
 \textcircled{6} \quad \textcircled{7} \quad \textcircled{5} \quad \textcircled{2} \quad \textcircled{1} \quad \textcircled{8} \quad \textcircled{4} \quad \textcircled{3} \\
 \underline{5 + 9 - 4 * (8 - 6 / 2) + 1 * (7 - 3)} \\
 5 + 9 - 4 * (8 - \underline{6 / 2}) + 1 * (7 - 3) \\
 5 + 9 - 4 * \underline{8 / 2} + 1 * \underline{7 - 3} \\
 5 + 9 - \underline{4 * 8 / 2} + \underline{1 * 7 - 3} \\
 \underline{5 + 9 - 4 * 8 / 2} + \underline{1 * 7 - 3} \\
 \underline{5 + 9 - 4 * 8 / 2} + \underline{1 * 7 - 3} \\
 \underline{5 + 9 - 4 * 8 / 2} + \underline{1 * 7 - 3} \\
 \underline{5 + 9 - 4 * 8 / 2} + \underline{1 * 7 - 3}
 \end{array}$$

$59+4862/-*-173-5+$ \rightarrow postfix

$59+4862/-*-173-5+$

$59+4862/-*-173-5+$