

Infix to prefix algorithm

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- 1) start scanning from right to left
 - 2) If(current element is an operand)
Append it to the prefix expression
 - 3) Else if (current element is closing bracket ')')
Push it onto the stack
 - 4) Else if (current element is opening bracket '(')
 - Pop elements from the stack and append them to prefix exp till its corresponding closing brackets does not occur
 - Pop closing 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 > priority of current element)
{
 Pop element from the stack and append it
 to prefix 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 prefix expression.
  - 7) Reverse the prefix expression.

Infix expression :

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

Current element :

Prefix Expression:  $37-1*26/8-4*95+-+$

Reverse:  $+-+59*4-8/62*1-73$

Stack :

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