

Infix to prefix algorithm

27 April 2023 11:58

Infix expression:

$5*3/2*6/4+7-3+8/2$

Stack :

- 1) start scanning from right to left
- 2) If(current element is an operand)
Append it to the prefix expression
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.
- 3) Repeat the above steps till end of infix expression
- 4) Pop all the remaining elements from the stack one by one and append them to prefix expression
- 5) Reverse the prefix expression

Current element :

Prefix Expression: 28/3746235*/*/+--

Reverse: +-+/*/*5326473/82

$5*3/2*6/4+7-3+8/2$

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

5 * 3 / 2 * 6 / 4 + 7 - 3 + 8 / 2

1 * 1 * 5 3 2 6 4 + 7 - 3 + 1 8 2

- + 1 * 1 * 5 3 2 6 4 7 3 + 1 8 2

+-+/*/*5326473/82 → Prefix Exp.

+-+/*/*5326473/82