

## Algorithm to convert infix to prefix

1. *Reverse* the input string.
2. Start checking from the first position of the string.
3. If it is an **operand** then direct output it to prefix.
4. Else it is **operator** '+', '-', '\*', '/', '(', ')'
  - a. If it is ')' then *push* it to stack.
  - b. Else if it is '(' then *pop* from stack until the top of *stack* is become ')' and *discard* it ')'.
    - c. Else
      - \* If it has *higher priority* than the top of *stack*, then push it to *stack*.
      - \* Else pop from stack to prefix until it's *priority* become higher than the *top* of the *stack* and then go back to *previous step*.
5. If there is *more input* then go back to *step 2*.
6. If there is no more input then unstack all the remaining **operators** & add them to prefix.
7. Then *reverse* the output string.