

#### Steps to Convert Infix to Prefix (Reverse Method):

- 1) Given Infix Expression, reverse it.  
- While reversing, replace '(' with ')' and ')' with '('.
- 2) Print operands as they arrive.
- 3) If stack is empty or contains a right parenthesis on top, push the incoming operator into the stack.
- 4) If the incoming symbol is ')', push it onto the stack.
- 5) If the incoming symbol is '(', pop the stack and print operators until a right parenthesis is found.
- 6) If the incoming symbol has higher precedence than the top of the stack, push it onto the stack.
- 7) If the incoming symbol has lower precedence than the top of the stack, pop and print the top, then test the incoming operator against the new top of stack.
- 8) If the incoming operator has equal precedence with the top of the stack, use associativity rule.
- 9) If associativity is Left to Right ( $L \rightarrow R$ ), pop the top of stack and print it, then push the incoming operator.
- 10) If associativity is Right to Left ( $R \rightarrow L$ ), push the incoming operator directly.
- 11) At the end of the expression, pop and print all operators from the stack.
- 12) Reverse the result to obtain the final Prefix expression.