

## Infix Calculation

Monday, May 23, 2022 2:10 PM

It is the human readable form of mathematical operation eg:  $a*(b-c)/d+e$

Infix eg:  $a+b$   
Prefix eg:  $+ab$   
Postfix eg:  $ab+$

Expression Tree method to convert to prefix :  
(Follow BODMAS rule)



(Left side or path)  
prefix :-  $+/*ab-cde$

postfix :- (Right side)  
path  $ab-cd / e +$

### Algo

$$2 + (5 - 3 * 6 / 2)$$

### Rules

i) operand pushed to operand stack

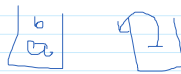
ii) '(' pushed to operator stack

iii) ')' pop all operator till '(' then pop '(' also

iv) operator then pop  $\leq$  operator (if we get ' $<$ ' or stack is empty or smaller priority operator)  
priority  
 $\rightarrow$   $top < / >$   
some some

Note:-

$$a - b$$



$$a - b \checkmark$$

$$b - a \times$$

> Niche se upper values