20-01-2026 - Apply stack operations to solve problems in various domains.

20 January 2026 13:31

=> Infix to Postfix Conversion :

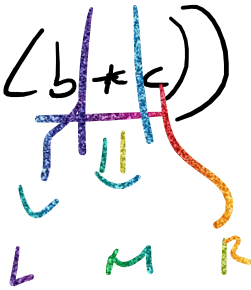
a + b * c

(a + (b * c))

Symbol	Precedence
+, -	1
*, /	2
( )	3

Prefix

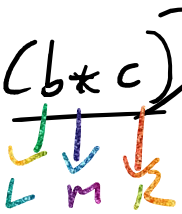
(a + (b * c))



(a + [* b c])

Postfix

(a + (b * c))



(a + [b c *])

a b c * +

+ a * b c

=> ((a + b) + (c * d))

Imp:

If repeated

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Prefix

$((a+b)+[*cd])$

$([+ab]+[*cd])$

$(++ab*cd)$

Postfix

$((a+b)+[cd*])$

$([ab+]+[cd*])$

$(ab+cd*+)$

ensure to move left to right.

=> Associativity & Unary Operations

Symbol	Precedence	Associativity
+, −	1	L − R
*, /	2	L − R
^	3	R − L
—	4	R − L
( )	5	L − R

=> $(((a+5)+c)-d)$

Right

Left to Right

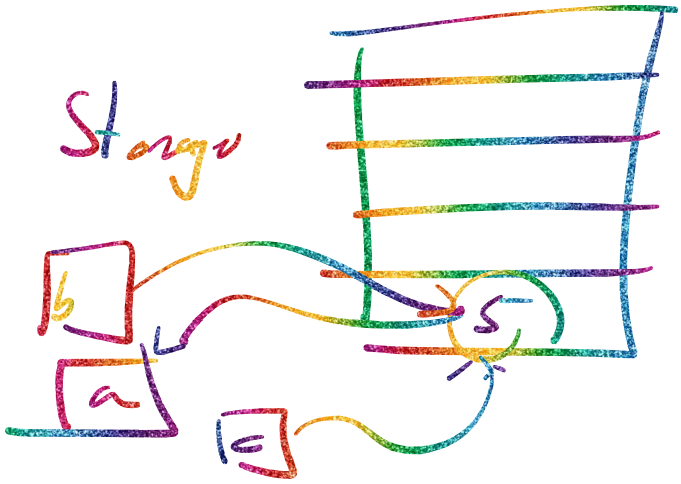
$((([ab+]+c)-d)$

$((([ab+c+]-d)$

$ab+c+d-$

Left to

$a=b=c=5$



Right to Left

$\Rightarrow (a \wedge (b \wedge c)) = a^{b^c}$

2^{3^2}

$(a \wedge [bc\wedge])$

2^{3^2}

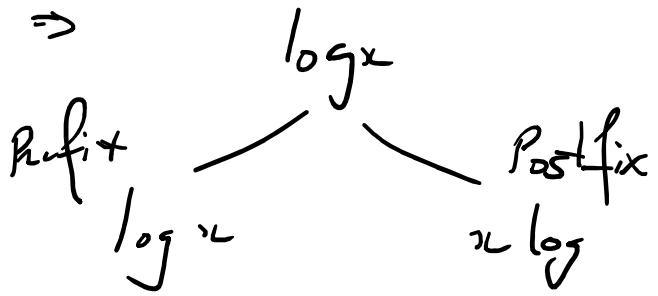
$abc\wedge\wedge$

$\Rightarrow -a \Rightarrow *p \Rightarrow n!$

$a-$

$p*$

$n!$



-> $-a+b*\log n!$

$-a+b*\log[n!]$

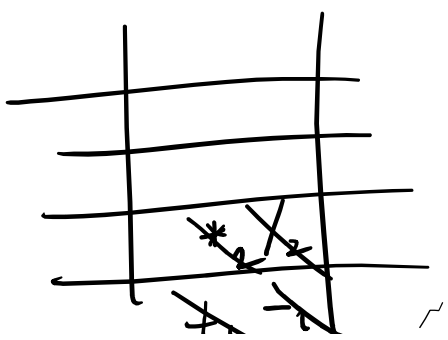
$[-a]+b*[n!\log]$

$[a-]+(b*[n!\log])$

$[a-]+[bn!\log*]$

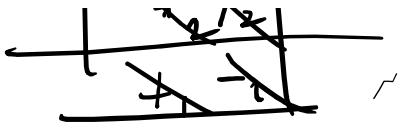
$a-bn!\log*+$

=> $a+b*c-d/e$ => $[abc*+de/-]$



Postfix : $[abc*+de/-]$

Sym	Pri	Assc
+, -	1	L-R
*, /	2	L-R



*, / | < | <-K

=> lower prec^n operators cannot be on the top of higher prec^n operators.

=> Equal operators pop out till the end. (Do not pop down lower operators).

=> a + b * c - d / e

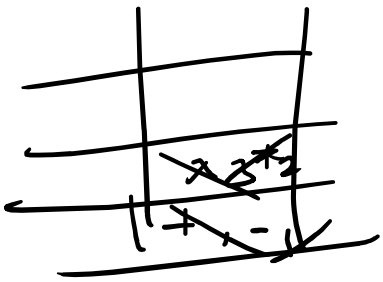
Sym	Stack	Postfix
a	-	a
+	+	a
b	+	ab
*	*, +	ab
c	*, +	abc
-	-	abc*+
d	-	abc*+d
/	/, -	abc*+d
e	/, -	abc*+de
p	-	abc*+de/-

=> a + b ^ c - d * f

Postfix

[a b c ^ + d f * -]

Sym	P	A
+, -	1	L-R
*, /	2	L-R
^	3	R-L



a + b ^ c - d + f

a b c ^ + d f * -