

Prefix Infix Postfix Conversions

2^3

2^3

✓ What is an operation / operand →

A - 2
a - 8
0 - 9

✓ Priority

↓

\wedge	→	3
$*$ /	→	2
$+$ -	→	1
	→	-1

Infix to Postfix

Infix to Prefix

Postfix to Infix

Prefix to Infix

Prefix to Postfix

Postfix to Prefix



Infix to Postfix

$a + b * (c^d - e)$
↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑

$i = 0$	<u>st</u>	<u>ans</u>
a		a
+	+	a
b	+	ab
*	+ *	ab
(+ * (ab
c	+ * (abc
^	+ * (^	abc
d	+ * (^	abcd
-	+ * (-	abcd ^
e	+ * (-	abcd ^ e



a
 $+$
 b
 $*$
 $($
 c
 $^$
 d
 $-$
 e
 $)$

$+$
 $+$
 $+ *$
 $+ * ($
 $+ * ($
 $+ * (^$
 $+ * (^$
 $+ * (-$
 $+ * \cancel{f}$
 $+ *$
 $\uparrow \uparrow$

a
 a
 ab
 ab
 ab
 abc
 abc
 $abcd$
 $abcd ^$
 $abcd ^ e$
 $abcd ^ e -$
 $abcd ^ e - * +$



Infix to Prefix

$$(A + B) * C - D + F$$



$$F + D - C * (B + A)$$

1. Reverse the infix
2. Infix to postfix
3. Reverse that answer



1. Reverse the infix
2. Infix 2 postfix
3. Reverse that answer



	SF	ans
I		
P		P
+	+	P
D	+	PD
-	+ -	PD
C	+ -	PDC
*	+ - *	PDC
(+ - * (PDC
B	+ - * (PDCB
+	+ - * (+	PDCB
A	+ - * (+	PDCBA
)	+ - *)	<u>PDCBA + * - +</u>



Postfix to Infix

$AB - DE + F * /$
 $\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$

\downarrow
A
B
-
D
E
+
F
*

st
A
AB
(A-B),
(A-B), D
(A-B), D, E
(A-B), (D+E)
(A-B), (D+E), F
A-B, ((D+E)*F)



$$A B - D E + F * /$$

$$\uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow \uparrow$$

:	st
A	A
B	A B
-	(A - B),
D	(A - B), D
E	(A - B), D, E
+	(A - B), (D + E)
F	(A - B), (D + E), F
*	(A - B), ((D + E) * F)
/	((A - B) / ((D + E) * F))



Prefix to Infix

* + P @ - M N
↑ ↑ ↑ ↑ ↑

;

st

N

N

M

N, M

-

(M - N)

@

(M - N), @

P

(M - N), @, P

+

(M - N), (P + @)

*

((P + @) * (M - N))



Postfix to Prefix

AB - DE + F * /
↑ ↑ ↑ ↑ ↑ ↑ ↑

i

A
B
-
D
E
+
F

st

A
A, B
- AB,
- AB, D
- AB, D, E
- AB, + DE
- AB, + DE, F



	$AB - DE + F \times /$ $\uparrow \uparrow \uparrow \uparrow \uparrow \nearrow \nearrow \nearrow \nearrow$	
i		st
A		A
B		A, B
-		-AB,
D		-AB, D
E		-AB, D, E
+		-AB, +DE
F		-AB, +DE, F
*		-AB, *+DEF
/		/ -AB * + DEF



Prefix to Postfix

/ - AB * + DEF
↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑

;

F

E

D

+

*

B

A

-

/

st

F

F, E

F, E, D

F, DE +

DE + F *

DE + F *, B

DE + F *, B, A

DE + F *, AB -

AB - DE + F */

