

Infix

$A \oplus B$
| |

=

Postfix

$AB \oplus$
~

Prefix

= $\oplus AB$

$2 \oplus 3 \ominus 4$
| | |

$2 \oplus 3 \ominus 4$
| | |

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Postfix (Reverse Polish Notation) (RPN)

#Operator Precedence

Incoming Operator

Higher \rightarrow Push

Lower \rightarrow Pop & Test & Push

Same \rightarrow { L-R (Pop, Push)
(Check Associativity) { R-L (Push)

) \rightarrow Pop until (

(\rightarrow Push

(If while popping encountered stop)

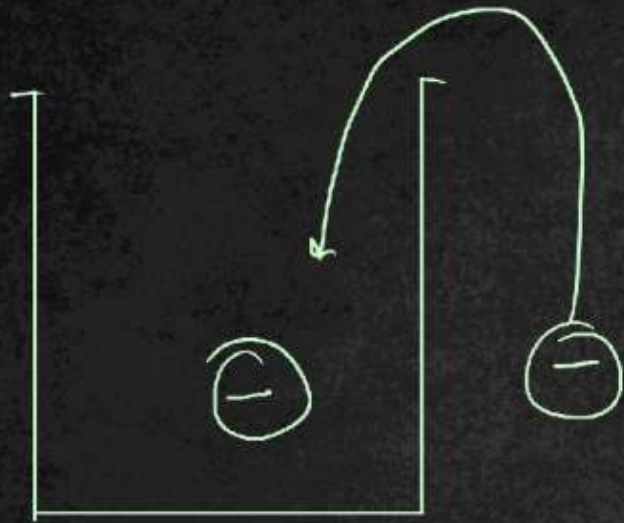
① (), [], { }

② ^

③ /, * \leftarrow

④ +, - \leftarrow

$$\begin{array}{r} 2 * 3 + 2 \\ \hline 6 + 2 = 8 \end{array}$$



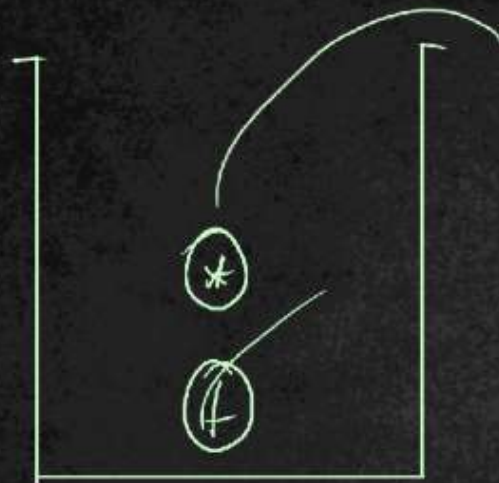
"If higher Just push it
else make it higher by
popping"

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→ A + B * C

↑ ↑ ↑ ↑ ↑

~~W~~

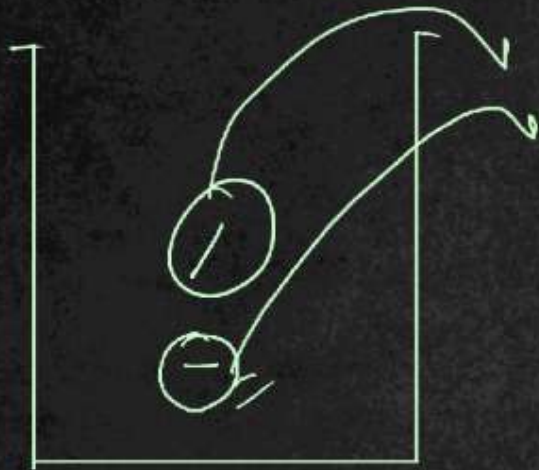


(ABC*+)

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Infix

$A + B * C - D ^ E / H$
↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑



Postfix

$\{ A B C * + D E ^ H / - \}$

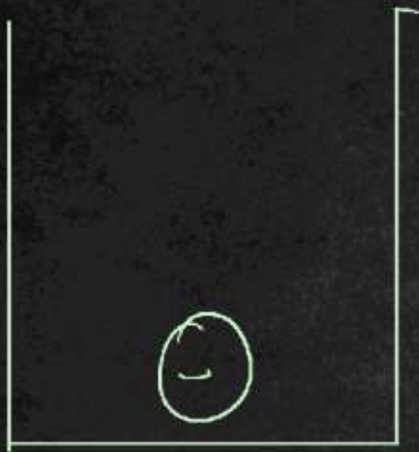
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{ Brackets }



Shortcut → Imagine as mini stack

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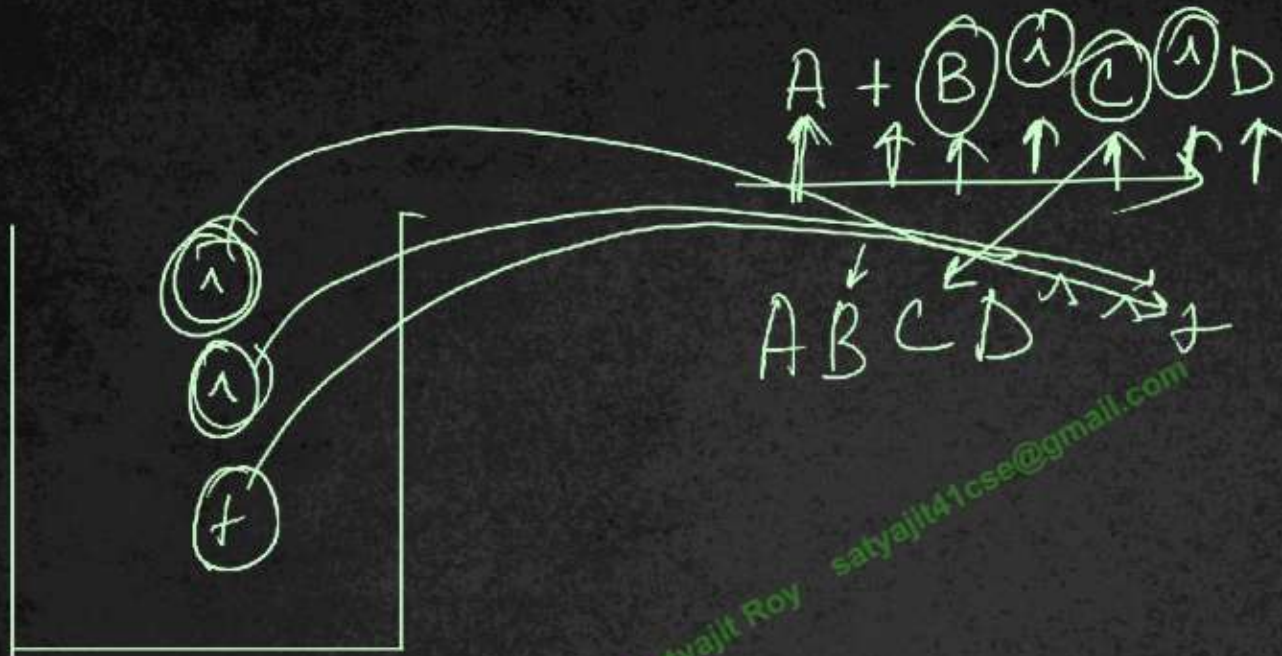


$$a \oplus b * (c \oplus d - e)^{\wedge} (f + g * h) / i$$

↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑

$$a b c d^{\wedge} e - f g h * + \wedge * + i -$$

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