

RPN (Reverse Polish Notation):

Reverse Polish Notation was developed in 1920 by LUKASIEWICZ Jan, as a way to write a mathematical expression without using parentheses and brackets.

Some calculator producers (like HEWLETT-PACKARD), realized that LUKASIEWICZ's method could be more logical than standard algebraic expressions when using calculators and computers, adapted RPN for its hand-held calculators.

RPN is also consistent in its usage, most 'non-RPN'-scientific calculators are half RPN and half algebraic. For example, to perform addition, you need to enter $2+4$ (algebraic), but to perform a sine calculation, you need first to enter the number and then to press the [SIN] button, which is a RPN method of entering the equation.

Implementations of RPN are 'Stack'-based; that is, operands are popped from a stack, and calculation results are pushed back onto it. Although this concept may seem obscure at first, RPN has the advantage of being easy, and therefore fast, for a computer to analyze.

The calculation $((6 + 7) * 9) + 8$ can be written down like this in RPN:

6 7 + 9 * 8 =