

Write a small parser to evaluate any legitimate expression consisting of a, b, c, +, *, (,), using the following CFG:

({<EXPR>, <TERM>, <FACTOR>}, {a, b, c, +, *, (,)}, R, <EXPR>), where R contains

<EXPR> \rightarrow <EXPR>+<TERM>|<TERM>

<TERM> \rightarrow <TERM>*<FACTOR>|<FACTOR>

<FACTOR> \rightarrow (<EXPR>)|a|b|c.

For example, ((a+b)*a+c)*a+b*c should be evaluated to 12 when a=1, b=2, c=3.