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CMPT 432 - Compilers
Lab 3

Crafting a Compiler

4.7

Leftmost:

num plus num times num plus num

T plus E times T plus E

T times F

T

E

Rightmost:

num times num plus num times num

T plus T

T plus E

E

Associativity of operators is allowed. Symmetrical programs will produce E, as shown above.

5.2c

parseStart (tokens) { if tokens(last) == T_$; parseValue(tokens-last) };

parseValue(tokens) { if tokens(only) == T_num ||

      (if tokens(first) == T_lparen && if parseExpr(tokens(mid))

      && if tokens(last) == T_rparen }

parseExpr(tokens) { if tokens(first) == T_plus && parseValue(tokens(mid)) &&

                parseValue(tokens(rest))) ||

                if tokens(first) == T_prod && parseValues(tokens(rest)) }

parseValues(tokens) { parseValue(tokens) && parseValues(tokens(rest))

              || if tokens == empty }

Dragon

4.2.1

    a) aa+a* > SS+a* > Sa* > SS* > S

    b) aa+a* > SS+S* > SS* > S

    c) S (SS*(SS+(**a, a, +**), S*(**a, ***)))