

Q1

a)

Usando o terceiro exemplo da tabela (1234-+-)

Gramática do lado esquerdo

expr term -

expr term + term -

XXXXXXXXXXXX Não é possível

Gramática do lado direito

term expr -

1 term expr + -

12 term expr - +-

123 term -+-

1234-+-

A gramática do lado direito consegue

expr → term expr +
| term expr -
| term

term → 0 | ... | 9

b)

expr → term expr +
| term expr -
| term

term → term fact *
| term fact /
| fact

fact → digi
| expr

digi → 0 | ... | 9

Ex: 12*34*-56+/

term
term fact /
term expr /
term term expr + /
term fact term +/
term 5 fact +/
term 5 6 +/
term 56+/

fact 56+/
expr 56+/
term expr - 56+/
term term - 56+/
term term fact * - 56+/

term fact 4 *-56+/
term 34*-56+/

term fact * 34*-56+/
fact 2 *34*-56+/

12*34*-56+/

c)

expr → + term expr
 | - term expr
 | term

term → * term fact
 | / term fact
 | fact

fact → digi
 | expr

digi → 0 | ... | 9

Ex: /-*12*34+56

term
/ term fact
/ fact fact
/ expr fact
/ - term expr fact
/- * term fact expr fact
/* fact fact expr fact
/* 1 2 expr fact

/*12 term fact
/*12 * term fact fact
/*12* fact fact fact
/*12* 3 4 fact

/*12*34 expr
/*12*34 + term expr
/*12*34+ fact term
/*12*34+ 5 fact
/*12*34+5 6

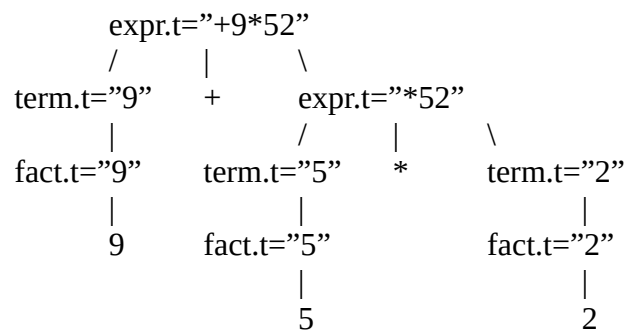
/*12*34+56

Q2

Gramática	Regras Semânticas
expr. + term expr ₁	expr.t = term.t expr ₁ .t '+'
expr. - term expr ₁	expr.t = term.t expr ₁ .t '-'
expr. term	expr.t = term.t
term. * term ₁ fact	term.t = term ₁ .t fact.t '*'
term. / term ₁ fact	term.t = term ₁ .t fact.t '/'
term. fact	term.t = fact.t
fact. digi	fact.t = digi.t
fact. expr	fact.t = expr.t
digi. 0	digi.t = '0'
...	...
digi. 9	digi.t = '9'

Q3

a)



b)

