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Where [e] is equivalent to the empty set, or epsilon.

LL(1) Grammar ==

```
1. <expr>   ::= <a> <t>
2. <t>      ::= <num>
3.           | [e]
4. <a>      ::= <b> <u>
5. <u>      ::= <binop> <a>
6.           | [e]
7. <b>      ::= <incrop> <b>
8.           | <c>
9. <c>      ::= <d> <v>
10 <v>      ::= <incrop> <v>
11           | [e]
12 <d>      ::= $<e>
13           | <e>
14 <e>      ::= (<expr>)
15           | <num>
<incrop> ::= ++ | --
<binop>  ::= + | -
<num>    ::= 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9
```

NULLABLE ===

```
Nullable(expr)   = False
Nullable(t)      = True
Nullable(a)      = False
Nullable(u)      = True
Nullable(b)      = False
Nullable(c)      = False
Nullable(v)      = True
Nullable(d)      = False
Nullable(e)      = False
Nullable(incrop) = False
Nullable(binop)  = False
Nullable(num)    = False
```

FIRST ==

```
FIRST(expr)   = {incrop, F, (, num}
FIRST(t)      = {num, [e]}
FIRST(a)      = {incrop, F, (, num}
FIRST(u)      = {binop, [e]}
FIRST(b)      = {incrop, F, (, num}
FIRST(c)      = {F, (, num}
FIRST(v)      = {incrop}
FIRST(d)      = {F, (, num}
FIRST(e)      = {(, num}
FIRST(incrop) = {incrop}
FIRST(binop)  = {binop}
FIRST(num)    = {num}
```

FOLLOW ===

```
FOLLOW(expr)   = {), $}
FOLLOW(t)      = {), $}
FOLLOW(a)      = {num, ), $}
FOLLOW(u)      = {num, ), $}
FOLLOW(b)      = {binop, num, ), $}
```

```
FOLLOW(c)      = {binop, num, ), $}
FOLLOW(v)      = {binop, num, ), $}
FOLLOW(d)      = {incrop, binop, num, ), $}
FOLLOW(e)      = {incrop, binop, num, ), $}
FOLLOW(incrop) = {incrop, F, (, num, ), $}
FOLLOW(binop)  = {incrop, F, (, num}
FOLLOW(num)    = {incrop, binop, num, ), $}

TABLE ==========================================================================

         Input Symbols
         (     )     num   incrop binop F     $
expr     r1          r1    r1           r1
t              r3    r2                       r3
a        r4          r4    r4           r4
u              r6    r6          r5           r6
b        r8          r8    r7           r8
c        r9          r9                 r9
v              r11   r11   r10    r11         r11
d        r13         r13                r12
e        r14         r14

================================================================================

Is our grammar a LL(1) grammar?
- Yes. For each set of productions for each symbol, their FIRST() definitions
are pairwise disjoint. Also, for each symbol, A, having a nullable RHS as a
production, each other non-nullable FIRST(RHS) /\ FOLLOW(A) is disjoint. These
fulfill the rules of LL(1) grammars. Furthermore, there is no left-recursion or
ambiguity.
```