Eliza Schuh

	FIRST table
Nonterminal	FIRST
	{start}
	{{,fits,sandal,loafer,cowboy,wellington,A,a}
	{{,fits,sandal,loafer,cowboy,wellington,A,a}
	{0,1,2,3,4,5,6,7,8,9}
	{sandal,loafer,cowboy,wellington}
	{sandal,loafer,cowboy,wellington}
	{0,1,2,3,4,5,6,7,8,9}
	{0,1,2,3,4,5,6,7,8,9}
	{fits}
	{A,a}
	{{}
	{0,1,2,3,4,5,6,7,8,9}
	{A,a}
var_char	{_,A,a}
char	{A,a}
cap_char	{A}
lower_char	{a}
int_lit	{0,1,2,3,4,5,6,7,8,9}

```
<start> -> start ; <stmt> end ;
<stmt> -> <stmt> <stmt_type>
<stmt> -> <stmt type>
<stmt_type> -> <as_stmt> ;
<stmt_type> -> <al_stmt> ;
<stmt_type> -> <block_stmt> ;
<stmt_type> -> <if_stmt> ;
<stmt_type> -> <if_stmt>
<as_stmt> -> <type> <var_name> = <expr>
<type> -> sandal
<type> -> loafer
<type> -> cowboy
<type> -> wellington
<var> -> int_lit
  <start> -> start ; <stmt> end ;
  <type> -> wellington
<var> -> int_lit
<expr> -> vvar>
<expr> -> vvar>
<expr> -> vvar> + <var>
<expr> -> vvar> + <var>
<expr> -> vvar> \ <var>
<expr> -> vvar> - \ <var>
<expr> -> vvar> - \ <var>
<if_stmt> -> fits ( \ \cdots 
     <var_name> -> char var_char var_char var_char var_char var_char
<var_name> -> char var_char var_char var_char var_char var_char var_char
     <var_name> -> char var_char var_char var_char var_char var_char var_char var_char
  var_char -> _
var_char -> char
  char -> cap_char
char -> lower_char
   cap_char -> A
  lower_char -> a
     int_lit-> 0
   int_lit-> 1
   int_lit-> 2
     int_lit-> 3
   int_lit-> 4
int_lit-> 5
     int_lit-> 6
      int_lit-> 7
      int_lit-> 8
     int_lit-> 9
```

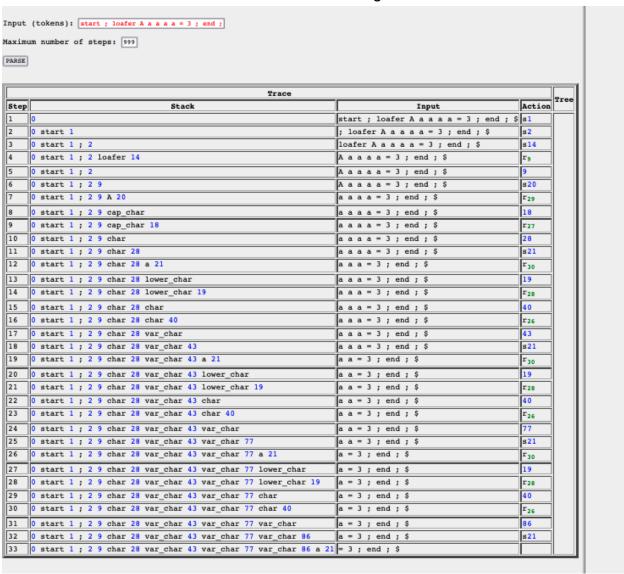
```
Input (tokens): start; loafer A a a a a a = 1; end;

Maximum number of steps: [778]

PARSE
```

	Trace		
tep	Stack	Input	Action
$\overline{}$	0	start ; loafer A a a a a a = 3 ; end ; 5	z1
-	0 start 1	; loafer A a a a a a = 3 ; end ; \$	z2
-	0 start 1 ; 2	loafer A a a a a a = 3; end; 5	z14
_	0 start 1 ; 2 loafer 14	A a a a a = 3; end; \$	rg
_	0 start 1 ; 2	A a a a a = 3; end; \$	9
-			
_	0 start 1 ; 2 9	A a a a a = 3; end; \$	#20
_	0 start 1 ; 2 9 A 20	aaaa=3; end; \$	F29
Ш	0 start 1 ; 2 9 cap_char	aaaa = 3; end; \$	18
	0 start 1 ; 2 9 cap_char 18	aaaa=3; end; \$	F27
.0	0 start 1 ; 2 9 char	aaaa=3; end; \$	28
1	0 start 1 ; 2 9 char 28	aaaa = 3; end; \$	E21
2	0 start 1 ; 2 9 char 28 s 21	aaaa = 3 ; end ; \$	F38
3	0 start 1 ; 2 9 char 28 lower_char	a a a a = 3 ; end ; \$	19
_	0 start 1 ; 2 9 char 28 lower char 19	a a a a = 3 ; end ; \$	r28
_	0 start 1 ; 2 9 char 28 char	a a a a = 3 ; end ; \$	40
_			
_	0 start 1 ; 2 9 char 28 char 40	a a a a = 3 ; end ; \$	r26
_	0 start 1 ; 2 9 char 28 var_char	a a a a = 3 ; end ; \$	43
	0 start 1 ; 2 9 char 28 var_char 43	a a a a = 3 ; end ; \$	z21
_	0 start 1 ; 2 9 char 28 var_char 43 a 21	a a a = 3 ; end ; \$	r38
0	0 start 1 ; 2 9 char 28 var_char 43 lower_char	a a a = 3 ; end ; \$	19
21	0 start 1 ; 2 9 char 28 var_char 43 lower_char 19	aaa = 3 ; end ; \$	r28
2	0 start 1 ; 2 9 char 28 var_char 43 char	a a a = 3 ; end ; \$	40
3	0 start 1 ; 2 9 char 28 war_char 43 char 40	a a a = 3 ; end ; \$	r26
	_	a a a = 3 ; end ; \$	77
_	0 start 1 ; 2 9 char 28 war_char 43 war_char 77	a a a = 3 ; end ; \$	E21
_	0 start 1 ; 2 9 char 28 war_char 43 war_char 77 a 21	a a = 3 ; end ; \$	r ₃₀
_			19
_	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 lower_char	a a = 3 ; end ; \$	_
_	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 lower_char 19	a a = 3; end; \$	r28
_		a a = 3; end; \$	40
	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 char 40	a a = 3 ; end ; \$	r ₂₆
31	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char	a a = 3; end; \$	86
32	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86	a a = 3 ; end ; 5	z21
13	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 a 21	a = 3 ; end ; \$	r38
34	0 start 1 ; 2 9 char 28 var char 43 war char 77 var char 86 lower char	a = 3 ; end ; \$	19
35		a = 3 ; end ; \$	F28
_	0 start 1 ; 2 9 char 28 war char 43 war char 77 war char 86 char	a = 3 ; end ; \$	40
_	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 char 40	a = 3 ; end ; \$	r ₂₆
_			_
_	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char	a = 3 ; end ; \$	107
_	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107	a = 3 ; end ; \$	z124
	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 a 124	= 3 ; end ; \$	r38
11	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 lower_char	= 3 ; end ; \$	122
12	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 lower_char 122	= 3 ; end ; \$	r ₂₈
13	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 char	- 3 ; end ; \$	120
14	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 char 120	= 3 ; end ; \$	r26
_	0 start 1 ; 2 9 char 28 war char 43 war char 77 war char 86 war char 107 war char	= 3 ; end ; \$	118
_	0 start 1 ; 2 9 char 28 war char 43 war char 77 war char 86 war char 107 war char 118	= 3 ; end ; \$	F22
_	0 start 1 ; 2 9	- 3 ; end ; \$	27
_			
_	0 start 1 ; 2 9 27	- 3 ; end ; \$	z42
_	0 start 1 ; 2 9 27 = 42	3 ; end ; \$	z70
_	0 start 1 ; 2 9 27 = 42 3 70	; end ; \$	r34
_	0 start 1 ; 2 9 27 = 42 int_lit	; end ; \$	64
2	0 start 1 ; 2 9 27 = 42 int_lit 66	; end ; \$	r12
3	0 start 1 ; 2 9 27 = 42	; end ; \$	65
4	0 start 1 ; 2 9 27 = 42 65	; end ; \$	F13
=		; end ; \$	64
_	0 start 1 ; 2 9 27 = 42 64	; end ; \$	ry.
_	0 start 1 ; 2	; end ; \$	5
_			
_	0 start 1 ; 2 5	; end ; \$	±24
9	0 start 1 ; 2 5 ; 24	end ; \$	ra
10	0 start 1 ; 2	end ; \$	4
1	0 start 1 ; 2 4	end ; \$	r ₂
2	0 start 1 ; 2	end ; \$	3
3	0 start 1 ; 2 3	end; \$	z22
			_
	0 start 1 ; 2 3 end 22	; \$	z41

This one fails because the variable name is not enough characters.



Input (tokend): [exect ; loader A * * * * * * 3 ; fits (A * * * * * * * 3) (seedal A * * * * * * * * * * * * *) end ;

Maximum number of steps: [939]

FAMORE

_	Trace		
tep	Stack	Input	Action
	0	start ; loafer A a a a a a = 3 ; fits (A a a a a a == 3) (sandal A a a a a a a = 4 ;) end ;	\$ s1
		; loafer A a a a a a = 3; fits (A a a a a a == 3) (sandal A a a a a a a a = 4;) end; \$	s2
		loafer A a a a a a = 3; fits (A a a a a a == 3) (sandal A a a a a a a a = 4;) end; \$	s14
	0 start 1 ; 2 loafer 14	Aaaaaa = 3; fits (Aaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	ry
	0 start 1; 2	Aaaaaa = 3; fits (Aaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	9
\neg	0 start 1 ; 2 9	Aaaaaa = 3; fits (Aaaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	s20
\neg	0 start 1 ; 2 9 A 20	aaaaa= 3; fits (Aaaaaa== 3) { sandal Aaaaaaa = 4; } end; \$	F29
\neg	0 start 1 ; 2 9 cap_char	a a a a a = 3; fits (A a a a a a == 3) { sandal A a a a a a a = 4; } end; \$	18
\neg		a a a a a = 3; fits (A a a a a a == 3) { sandal A a a a a a a = 4; } end; \$	F27
		a a a a a = 3; fits (A a a a a == 3) { sandal A a a a a a a = 4; } end; \$	28
∺		a a a a a = 3; fits (A a a a a a == 3) { sandal A a a a a a a = 4; } end; \$	s21
_		a a a a = 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	r30
		a a a a = 3; fits (A a a a a a == 3) { sandal A a a a a a a = 4; } end; \$	19
_		aaaa=3; fits (Aaaaaa==3) (sandal Aaaaaaa=4;) end; \$	r ₂₈
		aaaa=3; fits (Aaaaaa==3) (sandal Aaaaaaa=4;) end;\$	40
╝		aaaa=3; fits (Aaaaaa==3) (sandal Aaaaaaa=4;) end; \$	F26
	0 start 1 ; 2 9 char 28 war_char	aaaa= 3; fits (Aaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	43
_	0 start 1 ; 2 9 char 28 war_char 43	aaaa=3; fits (Aaaaa==3) (sandal Aaaaaaa=4;) end; \$	s21
1	0 start 1 ; 2 9 char 28 war_char 43 a 21	aaa=3; fits (Aaaaa==3) (sandal Aaaaaaa=4;) end; \$	F30
j	0 start 1 ; 2 9 char 28 war_char 43 lower_char	a a a = 3; fits (A a a a a a == 3) { sandal A a a a a a a a = 4; } end; \$	19
		a a a = 3; fits (A a a a a a == 3) (sandal A a a a a a a = 4;) end; \$	F28
		a a a = 3; fits (A a a a a a == 3) (sandal A a a a a a a a = 4;) end; \$	40
		aaa=3; fits (Aaaaaa==3) (sandal Aaaaaaa=4;) end; \$	r26
		a a a = 3; fits (Aaaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	726
			77
		aaa=3; fits (Aaaaa==3) (sandal Aaaaaaa=4;) end; \$	s21
		a a = 3; fits (A a a a a == 3) { sandal A a a a a a a = 4; } end; \$	r30
J	0 start 1 ; 2 9 char 28 war_char 43 war_char 77 lower_char	aa=3; fits (Aaaaa== 3) (sandal Aaaaaaa= 4;) end; \$	19
	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 lower_char 19	a a = 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	F28
٦	0 start 1 ; 2 9 char 28 war_char 43 war_char 77 char	a a = 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	40
٦	0 start 1 ; 2 9 char 28 war_char 43 war_char 77 char 40	a a = 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	r26
		a a = 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	86
		a a = 3; fits (A a a a a == 3) { sandal A a a a a a a = 4; } end; \$	s21
		a = 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	r30
_		a = 3; fits (Aaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	19
		a = 3; fits (A a a a a a == 3) (sandal A a a a a a a a = 4;) end; \$	
_			r ₂₈
		a = 3; fits (Aaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	40
	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 char 40	a = 3; fits (Aaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	r ₂₆
3	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char	a = 3; fits (Aaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	107
п	0 start 1 ; 2 9 char 28 war_char 43 war_char 77 war_char 86 war_char 107	a = 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	s124
٦	0 start 1 ; 2 9 char 28 war_char 43 war_char 77 war_char 86 war_char 107 a 124	= 3; fits (A a a a a == 3) (sandal A a a a a a a a = 4;) end; \$	r30
		= 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	122
		= 3; fits (A a a a a == 3) { sandal A a a a a a a a = 4; } end; \$	r ₂₈
_			120
		= 3 ; fits (A a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	
		= 3; fits (A a a a a == 3) { sandal A a a a a a a a = 4; } end; \$	r26
		= 3; fits (A a a a a == 3) (sandal A a a a a a a = 4;) end; \$	118
╝	0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 var_char 118	= 3; fits (A a a a a == 3) { sandal A a a a a a a a = 4; } end; \$	r ₂₂
	0 start 1 ; 2 9	= 3 ; fits (A a a a a == 3) { sandal A a a a a a a = 4 ; } end ; \$	27
	0 start 1 ; 2 9 27	= 3 ; fits (A a a a a == 3) { sandal A a a a a a a = 4 ; } end ; \$	s42
Ĭ	0 start 1 ; 2 9 27 = 42	3; fits (A a a a a == 3) (sandal A a a a a a a a = 4;) end; \$	s70
٦	0 start 1; 2 9 27 = 42 3 70	; fits (A a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	r34
		; fits (A a a a a == 3) (sandal A a a a a a a a " 4 ;) end ; \$	66
		; fits (Aaaaa== 3) (sandal Aaaaaaa = 4;) end; \$	F12
		; fits (Aaaaaa== 3) (sandal Aaaaaaa = 4;) end; \$	65
_			
		; fits (Aaaaa== 3) (sandal Aaaaaaa = 4;) end; \$	r ₁₃
		; fits (A a a a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	64
	0 start 1 ; 2 9 27 = 42 64	; fits (A a a a a == 3) (sandal A a a a a a a a " 4 ;) end ; \$	ry
П	0 start 1 ; 2	; fits (A a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	5
ń	0 start 1 ; 2 5	; fits (A a a a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	s24
T	0 start 1 ; 2 5 ; 24	fits (A a a a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	r3
		fits (Aaaaaa == 3) (sandal Aaaaaaa = 4;) end; \$	

61 0 start 1 ; 2 4	fits (A a a a a == 3) (sandal A a a a a a a = 4 ;) end ; \$	r ₂
62 0 start 1; 2	fits (A a a a a == 3) (sandal A a a a a a a = 4 ;) end ; \$	3
63 0 start 1; 2 3	fits (A a a a a == 3) (sandal A a a a a a a = 4 ;) end ; \$	s12
64 0 start 1; 2 3 fits 12	(A a a a a == 3) { sandal A a a a a a a = 4 ; } end ; \$	s37
65 0 start 1; 2 3 fits 12 (37	A a a a a == 3) (sandal A a a a a a a = 4 ;) end ; \$	s20
66 0 start 1 ; 2 3 fits 12 (37 A 20	a a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	F29
67 0 start 1; 2 3 fits 12 (37 cap_char	a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	18
68 0 start 1; 2 3 fits 12 (37 cap_char 18	a a a a a == 3) (sandal A a a a a a a = 4 ;) end ; \$	r ₂₇
69 0 start 1 ; 2 3 fits 12 (37 char	a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	17
70 0 start 1 ; 2 3 fits 12 (37 char 17	a a a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	s21
71 0 start 1 ; 2 3 fits 12 (37 char 17 a 21	a a a == 3) { sandal A a a a a a a = 4 ; } end ; \$	r30
72 0 start 1 ; 2 3 fits 12 (37 char 17 lower_char	a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	19
73 0 start 1 ; 2 3 fits 12 (37 char 17 lower_char 19	a a a == 3) (sandal A a a a a a a = 4 ;) end ; \$	r ₂₈
74 0 start 1 ; 2 3 fits 12 (37 char 17 char	a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	40
75 0 start 1 ; 2 3 fits 12 (37 char 17 char 40	a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	r ₂₆
76 0 start 1 ; 2 3 fits 12 (37 char 17 var_char	a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	38
77 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38	a a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	s21
78 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 a 21	a a a == 3) { sandal A a a a a a a a = 4 ; } end ; \$	r30
79 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 lower_char	a a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	19
80 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 lower_char 19	a a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	F28
81 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 char	a a a == 3) (sandal A a a a a a a a = 4 ;) end ; S	40
82 0 start 1; 2 3 fits 12 (37 char 17 var char 38 char 40	a a a == 3) { sandal A a a a a a a a 4 ; } end ; \$	r ₂₆
83 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char	a a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	63
84 0 start 1; 2 3 fits 12 (37 char 17 var char 38 var char 63	a a a == 3) (sandal A a a a a a a a = 4 ;) end; \$	s21
85 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 a 21	a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	r ₃₀
		19
86 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 lower_char 87 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 lower_char 19	a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$ a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	r ₂₈
88 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 char	a a == 3) (sandal A a a a a a a a a 4 ;) end ; \$	40
89 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 char 40	a a == 3) { sandal A a a a a a a a a 4 ; } end ; \$	r ₂₆
90 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char	a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	81
91 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81	a a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	s21
92 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 a 21	a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	r ₃₀
93 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 lower_char	a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	19
94 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 lower_char 19	a == 3) (sandal A a a a a a a = 4 ;) end ; \$	F28
95 0 start 1 ; 2 3 fits 12 (37 char 17 war_char 38 war_char 63 war_char 81 char	a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	40
96 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 char 40	a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	r ₂₆
97 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 var_char	a == 3) (sandal A a a a a a a a = 4 ;) end ; \$	101
98 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 var_char 101	a == 3) (sandal A a a a a a a = 4 ;) end ; \$	s117
99 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 var_char 101 a 117	== 3) { sandal A a a a a a a a = 4 ; } end ; \$	r30
100 0 start 1 ; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 var_char 101 lower_char	== 3) (sandal A a a a a a a a = 4 ;) end ; \$	115
101 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 var_char 101 lower_char 115	== 3) (sandal A a a a a a a a = 4 ;) end ; \$	F28
102 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 var_char 101 char	== 3) (sandal A a a a a a a a = 4 ;) end ; \$	113
103 0 start 1; 2 3 fits 12 (37 char 17 var char 38 var char 63 var char 81 var char 101 char 113	== 3) (sandal A a a a a a a a = 4 ;) end ; \$	r ₂₆
104 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 var_char 101 var_char	== 3) (sandal A a a a a a a a = 4 ;) end ; \$	111
105 0 start 1; 2 3 fits 12 (37 char 17 var_char 38 var_char 63 var_char 81 var_char 101 var_char 111	== 3) (sandal A a a a a a a a = 4 ;) end ; \$	r ₂₂
106 0 start 1; 2 3 fits 12 (37	== 3) (sandal A a a a a a a a = 4 ;) end ; \$	62
100 0 start 1 ; 2 3 fits 12 (3/ 107 0 start 1 ; 2 3 fits 12 (3/ 62		62 880
	== 3) (sandal A a a a a a a a = 4 ;) end ; \$	s94
108 0 start 1; 2 3 fits 12 (37 62 == 80 109 0 start 1; 2 3 fits 12 (37 62 == 80 3 94	3) (sandal A a a a a a a a = 4 ;) end ; \$) (sandal A a a a a a a a = 4 ;) end ; \$	
		F34
110 0 start 1; 2 3 fits 12 (37 62 == 80 int_lit) (sandal A a a a a a a a = 4 ;) end ; \$	90
111 0 start 1 ; 2 3 fits 12 (37 62 == 80 int_lit 90) (sandal A a a a a a a a = 4 ;) end ; \$	r ₁₉
112 0 start 1 ; 2 3 fits 12 (37) (sandal A a a a a a a a = 4 ;) end ; \$	61
113 0 start 1 ; 2 3 fits 12 (37 61) { sandal A a a a a a a = 4 ; } end ; \$	s79
114 0 start 1 ; 2 3 fits 12 (37 61) 79	(sandal A a a a a a a a = 4 ;) end ; \$	s89
115 0 start 1 ; 2 3 fits 12 (37 61) 79 (89	sandal A a a a a a a a = 4 ; } end ; \$	s13
116 0 start 1 ; 2 3 fits 12 (37 61) 79 (89 sandal 13	A a a a a a a = 4 ;) end ; \$	re
117 0 start 1; 2 3 fits 12 (37 61) 79 (89	A a a a a a a = 4;) end; \$	9
118 0 start 1 ; 2 3 fits 12 (37 61) 79 (89 9	A a a a a a a = 4 ;) end ; \$	s20
119 0 start 1 ; 2 3 fits 12 (37 61) 79 (89 9 A 20	a a a a a a = 4 ;) end ; \$	r ₂₉
120 0 start 1 ; 2 3 fits 12 (37 61) 79 (89 9 cap_char	a a a a a a = 4 ;) end ; \$	18
121 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 cap_char 18	a a a a a a = 4 ;) end ; \$	r ₂₇
122 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char	a a a a a a = 4 ;) end ; \$	28
123 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28	a a a a a a a = 4 ;) end ; \$	s21
124 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 a 21	a a a a a = 4 ; } end ; \$	r30
125 0 start 1; 2 3 fits 12 (37 61) 79 { 89 9 char 28 lower char	a a a a a a = 4 ;) end ; \$	19
126 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 lower char 19	a a a a a = 4 ;) end ; \$	F28
127 0 start 1 ; 2 3 fits 12 (37 61) 79 (89 9 char 28 char	a a a a a = 4; } end; \$	40
128 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 char 40	a a a a a = 4;) end; \$	r ₂₆
128 start 1 ; 2 3 fits 12 (3/ 61) /9 (89 9 char 28 char 40		
1752 No profit 1 2 5 2 1779 75 (3) 91) 18 (83 A GUST 58 ASL CUST.	a a a a a = 4;) end; \$	43

132 0 start 1 ; 2 3 fits 12 (37 61) 79 { 89 9 char 28 var char 43 lower char	a a a a a = 4 ;) end ; \$	119
	a a a a a = 4 ;) end ; \$ a a a a a = 4 ;) end ; \$	r ₂₈
		40
	a a a a = 4 ;) end ; \$	_
	a a a a = 4 ;) end ; \$	r26
	a a a a = 4 ;) end ; \$	s21
	a a a a = 4 ;) end ; \$	
	a a a = 4 ;) end ; \$	r30
	a a a a = 4 ;) end ; \$	19
	a a a a = 4 ; } end ; \$	r ₂₈
	a a a = 4 ;) end ; \$	40
142 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 char 40	a a a = 4 ;) end ; \$	F26
143 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char	a a a = 4 ;) end ; \$	86
	a a a = 4 ;) end ; \$	s21
145 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 a 21	a a = 4 ;) end ; \$	r30
146 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 lower_char	a a a = 4 ;) end ; \$	19
147 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 lower_char 19	a a = 4 ;) end ; \$	r28
148 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 char	a a = 4 ;) end ; \$	40
149 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 char 40	a a a = 4 ;) end ; \$	r26
150 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 var_char	a a a = 4 ;) end ; \$	107
	a a a = 4 ;) end ; \$	s124
	a a = 4 ;) end ; \$	r30
	a a = 4;) end;\$	122
	a = 4;) end; \$	r28
	a a = 4;) end; \$	120
	a a = 4;) end; \$	r ₂₆
	a a = 4;) end; \$ a a = 4;) end; \$	118 s124
	a = 4;) end; \$	r30
	a = 4 ; } end ; \$	122
	a = 4;) end; \$	r ₂₈
	a = 4; } end; \$	120
	a = 4; } end; \$	r26
	a = 4 ;) end ; \$	128
	a = 4;) end; \$	s143
166 0 start 1 ; 2 3 fits 12 (37 61) 79 { 89 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 var_char 118 var_char 128 a 143	= 4 ;) end ; \$	F30
	= 4 ;) end ; \$	141
0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 var_char 118 var_char 128 lower_char 141	= 4 ;) end ; \$	r28
169 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 var_char 118 var_char 128 char	= 4 ;) end ; \$	139
170 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 var_char 118 var_char 128 char 139	= 4 ;) end ; \$	F26
171 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 var_char 118 var_char 128 var_char	= 4 ;) end ; \$	137
	= 4 ;) end ; \$	r24
173 0 start 1; 2 3 fits 12 (37 61) 79 (89 9	= 4 ;) end ; \$	27
174 0 start 1; 2 3 fits 12 (37 61) 79 (89 9 27	= 4 ;) end ; \$	s42
175 0 start 1 ; 2 3 fits 12 (37 61) 79 (89 9 27 = 42	4 ;) end ; \$	s71
	;) end ; \$	r35
	;) end ; \$	66
	1) end : \$	r12
	;) end ; \$	65
	;) end ; \$	r ₁₃
) end ; \$	64
		-
	;) end ; \$	ry
	;) end ; \$	31
	;) end ; \$	s46
) end ; \$	r ₃
) end ; \$	30
) end ; \$	r ₂
188 0 start 1 ; 2 3 fits 12 (37 61) 79 (89) end ; \$	110
) end ; \$	s126
189 0 start 1 ; 2 3 fits 12 (37 61) 79 (89 110		r20
189 start 1 ; 2 3 fits 12 (37 61) 79 (89 110	end ; \$	
189 0 start 1; 2 3 fits 12 (37 61) 79 (89 110 190 0 start 1; 2 3 fits 12 (37 61) 79 (89 110) 126	end; \$ end; \$	88
189 0 start 1, 2 2 fits 12 (27 61) 79 (89 110 100 0 start 1, 2 2 fits 12 (27 61) 79 (89 110) 126 151 0 start 1, 2 2 fits 12 (27 61) 79 (89 110) 126		88 r ₁₈
189	end;\$	
189 0 start 1,2 2 fits 12 (27 61) 77 (89 110) 190 0 start 1,2 2 fits 12 (27 61) 77 (89 110) 190 0 start 1,2 3 fits 12 (37 61) 77 (89 110) 126 (191 0 start 1,2 3 fits 12 (37 61) 79 (80 110) 126 (192 0 start 1,2 3 fits 12 (37 61) 79 80 (193 0 start 1,2 2 3 (193 0 start 1,2 2 3 (194 0 start 1,2 2 3 (195 0 start 1,2 2 3 (195 0 start 1,2	end ; \$ end ; \$	r ₁₈
189 [0 start 1, 2 3 fits 12 (37 61) 79 (89 110) 100 [0 start 1, 2 3 fits 12 (37 61) 79 (89 110) 126) 131 [0 start 1, 2 3 fits 12 (37 61) 79 (89 110) 126) 132 [0 start 1, 2 3 fits 12 (37 61) 79 88) 133 [0 start 1, 2 3 fits 12 (37 61) 79 88] 134 [0 start 1, 2 3 fits 12 (37 61) 79 88]	and ; \$	r ₁₈ 8 r ₆
189 0 state 1 2 2 3 fiss 12 (37 61) 79 (89 110) 0 state 1 2 2 3 fiss 12 (37 61) 79 (89 110) 190 0 state 1 2 2 3 fiss 12 (37 61) 79 (89 110) 126 191 0 state 1 2 3 fiss 12 (37 61) 79 88 192 0 state 1 2 2 3 fiss 12 (37 61) 79 88 193 0 state 1 2 2 3 194 0 state 1 2 2 3 8 195 0 state 1 2 2 3 8 195 0 state 1 2 2 3 8 195 0 state 1 2 2 3 8 196 0 state 1 3 2 3 8 197 0 state 1 3 2 3 8 198 0 state 1 3 2 3 8 199 0 state	end ; \$ end ; \$ end ; \$ end ; \$	r ₁₈ 8 r ₆ 23
189 atast 1 2 3 dist 12 (3 46.) 77 (89 180 10 10 10 10 10 10 10	and; \$	r ₁₈ 8 r ₆
189 D state: 1; 2 3 fits 12 (37 61) 79 (89 110) 190 State: 1; 2 3 fits 12 (37 61) 79 (89 110) 191 D state: 1; 2 3 fits 12 (37 61) 79 (89 110) 192 D state: 1; 2 3 fits 12 (37 61) 79 88 193 D state: 1; 2 3 5 fits 12 (37 61) 79 88 194 D state: 1; 2 3 5 fits 12 (37 61) 79 88 195 D state: 1; 2 3 5 fits 12 (37 61) 79 88 196 D state: 1; 2 3 5 fits 12 (37 61) 79 88 197 D state: 1; 2 3 5 fits 12 (37 61) 79 88	and ; 5	r ₁₈ 8 r ₆ 23 r ₁ 3
Table	and; \$	r ₁₈ 8 r ₆ 23

```
Input (tokens): start ; loafer A a a a a a = 3 ;
Maximum number of steps: 999
PARSE
                                                  Stack
Step
                                                                                                     start ; loafer A a a a a a = 3 ; $ s1
     0 start 1
                                                                                                     ; loafer A a a a a a = 3 ; $
   0 start 1 ; 2
0 start 1 ; 2 loafer 14
                                                                                                     loafer A a a a a a = 3; $
                                                                                                                                          s14
                                                                                                     A a a a a a = 3 : $
    0 start 1 ; 2
                                                                                                    Aaaaa=3;$
   0 start 1 ; 2 9
0 start 1 ; 2 9 A 20
                                                                                                    A a a a a a = 3 : $
                                                                                                                                          s20
                                                                                                     a a a a a = 3 ; $
                                                                                                                                           r29
8 0 start 1 ; 2 9 cap_char
                                                                                                    a a a a a = 3 ; $
                                                                                                                                          18
    0 start 1 ; 2 9 cap_char 18
0 start 1 ; 2 9 char
                                                                                                     a a a a a = 3 ; $
                                                                                                                                          E27
11 0 start 1 ; 2 9 char 28
                                                                                                    a a a a a = 3 ; $
     0 start 1 ; 2 9 char 28 a 21
                                                                                                    a a a a = 3;$
                                                                                                                                          r30
       start 1 ; 2 9 char 28 lower_char
                                                                                                     a a a a = 3 ; $
14 0 start 1 ; 2 9 char 28 lower_char 19
                                                                                                     a a a a = 3 ; $
                                                                                                                                          r28
15 0 start 1 ; 2 9 char 28 char
16 0 start 1 ; 2 9 char 28 char 4
                                                                                                    a a a a = 3 ; $
                                                                                                                                           r<sub>26</sub>
17 0 start 1 ; 2 9 char 28 var_char
                                                                                                    aaaa = 3;$
                                                                                                                                          43
18
    0 start 1 ; 2 9 char 28 var_char 43
0 start 1 ; 2 9 char 28 var_char 43 a 21
                                                                                                    a a a a = 3; $
                                                                                                                                          s21
19
                                                                                                     aaa=3;$
                                                                                                                                           r30
20 0 start 1 ; 2 9 char 28 var_char 43 lower_char
                                                                                                    a a a = 3 ; $
                                                                                                                                          19
     0 start 1 ; 2 9 char 28 var_char 43 lower_char 19
                                                                                                     a a a = 3 ; $
                                                                                                                                          F28
       start 1 ; 2 9 char 28 var_char 43 char
23 0 start 1 ; 2 9 char 28 var_char 43 char 40
                                                                                                     a a a = 3 ; $
                                                                                                                                          F26
24 0 start 1 ; 2 9 char 28 var_char 43 var_char
                                                                                                    aaa=3;$
                                                                                                     aaa=3;$
       start 1 ; 2 9 char 28 var_char 43 var_char
26 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 a 21
                                                                                                    a a = 3 ; $
                                                                                                                                          F30
                                                                                                    aa=3;$
27 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 lower_char
      0 start 1 ; 2 9 char 28 var_char 43 var_char 77 lower_char 19
                                                                                                                                           r<sub>28</sub>
29 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 char
                                                                                                    aa=3;$
                                                                                                                                          40
30 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 char 40
                                                                                                    a a = 3; $
                                                                                                                                          r<sub>26</sub>
     0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char
0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86
                                                                                                     aa=3;$
32
                                                                                                    a a = 3; $
                                                                                                                                          s21
                                                                                                     a = 3 ; $
33
     0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 a 21
                                                                                                                                          F30
       start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 lower_char
35 | 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 lower_char 19
                                                                                                    a = 3 ; $
                                                                                                                                          r28
                                                                                                    a = 3 ; $
36 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 char
       start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 char 40
                                                                                                                                           r26
     0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char
                                                                                                    a = 3 ; $
     0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 10
                                                                                                     a = 3 ; $
                                                                                                                                          s124
40
      0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 a 124
                                                                                                                                           30
41 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 lower_char
                                                                                                    = 3 ; $
                                                                                                                                          122
42 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 lower_char 122 = 3 ; $
                                                                                                                                          r<sub>28</sub>
43
     0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 char
0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 char 120
                                                                                                     = 3;$
                                                                                                                                          120
44
                                                                                                     = 3 ; $
                                                                                                                                          F26
                                                                                                     = 3 ; $
45 0 start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 var_char
                                                                                                                                          118
       start 1 ; 2 9 char 28 var_char 43 var_char 77 var_char 86 var_char 107 var_char 118
                                                                                                     = 3 ; $
                                                                                                                                          r22
47 0 start 1 ; 2 9
                                                                                                     = 3;$
48 0 start 1 ; 2 9 27
                                                                                                     = 3 ; $
                                                                                                                                          s42
      0 start 1 ; 2 9 27 = 42
                                                                                                     3;$
                                                                                                                                           s70
50 0 start 1 ; 2 9 27 = 42 3 70
                                                                                                     ; $
                                                                                                                                          F34
51 0 start 1 ; 2 9 27 = 42 int_lit
                                                                                                     ; $
                                                                                                     ; $
52
      0 start 1 ; 2 9 27 = 42 int_lit 66
                                                                                                                                           r<sub>12</sub>
53 0 start 1 ; 2 9 27 = 42
                                                                                                     ; $
54 0 start 1 ; 2 9 27 = 42 65
                                                                                                     ; $
                                                                                                                                          r<sub>13</sub>
55 0 start 1 ; 2 9 27 = 42

56 0 start 1 ; 2 9 27 = 42 64
                                                                                                     ; $
                                                                                                                                          64
                                                                                                     ; $
                                                                                                    ; $
57 0 start 1 ; 2
      0 start 1 ; 2 !
59 0 start 1 ; 2 5 ; 24
```

This one fails due to not end statement