

THE ORIGINAL GRAMMAR (With Substitutions)

LEGEND	
State	New Name
<prog>	P
<identifier>	I
A	A
<dec-list>	D
<dec>	U
J	J
<type>	T
<stat-list>	S
C	C
<stat>	V
<write>	W
H	H
<assign>	X
<expr>	E
<expr>'	G
<term>	Y
<term>'	K
<factor>	F
<number>	N
B	B
<sign>	Z
<digit>	Q
<letter>	R

P	->	program I ; var D begin S end.
I	->	R A
A	->	R A
A	->	Q A
A	->	λ
D	->	U : T ;
U	->	I J
J	->	, U
J	->	λ
T	->	integer
S	->	V C
C	->	S
C	->	λ
V	->	W
V	->	X
W	->	display (H) ;
H	->	"value=" , I
H	->	I
X	->	I = E ;
E	->	Y E'
E'	->	+ Y E'
E'	->	- Y E'
E'	->	λ
Y	->	F Y'
Y'	->	* F Y'
Y'	->	/ F Y'
Y'	->	λ
F	->	(E)
F	->	I

The Original Grammar with Substitutions

F	->	N
N	->	Z Q B
B	->	Q B
B	->	λ
Z	->	+
Z	->	-
Z	->	λ
Q	->	0
Q	->	1
Q	->	2
Q	->	3
Q	->	4
Q	->	5
Q	->	6
Q	->	7
Q	->	8
Q	->	9
R	->	p
R	->	q
R	->	r
R	->	s