**GIC**

S 🡪 V R F | F R V

W 🡪 S O S

R 🡪 >|>=|<|<=|==|~=

O 🡪 &||

P 🡪 P+T | P–T | T

T 🡪 T\*K | T/K | K

K 🡪 K^B |B

B 🡪 -J|J

J 🡪 Z | (P)

Z 🡪 V | F

F 🡪 D | C

C 🡪D.D

L((L|D|\_L|\_D) \_? )\*

V 🡪 L A X

X 🡪 \_ |λ

A 🡪 AL|AD|A\_L|A\_D|λ

L 🡪 LQ|Q

Q = [a-z A-Z]

D 🡪 DÑ|Ñ

Ñ= [0,1,2..9]

**Quitando recursividad izquierda**

S 🡪 V R F | F R V

W 🡪 S O S

R 🡪 >|>=|<|<=|==|~=

O 🡪 &||

P 🡪 P+T | P–T | T P 🡪TP’

P’ 🡪 +TP’|-TP’| λ

T 🡪 T\*K | T/K | K T 🡪 TK’

T’ 🡪 \*KT’|/KT’| λ

K 🡪 K^B |B k 🡪 BK’

K’ 🡪^BK’| λ

B 🡪 -J|J

J 🡪 Z | (P)

Z 🡪 V | F

F 🡪 D | C

C 🡪D.D

V 🡪 L A X

X 🡪 \_ |λ

A 🡪 AL|AD|A\_L|A\_D|λ A 🡪 λA´

A’ 🡪 LA'|DA’|\_LA’|\_DA’| λ

L 🡪 LQ|Q L 🡪 QL’

L’ 🡪QL’| λ

Q = [a-z A-Z]

D 🡪 DÑ|Ñ D 🡪 ÑD’

D’ 🡪ÑD’| λ

Ñ= [0,1,2..9]

**Gramática LL**

S 🡪 V R F | F R V

W 🡪 S O S

R 🡪 >|>=|<|<=|==|~=

O 🡪 &||

P 🡪TP’

P’ 🡪 +TP’|-TP’| λ

T 🡪 KT’

T’ 🡪 \*KT’|/KT’| λ

K 🡪 BK’

K’ 🡪^BK’| λ

B 🡪 -J|J

J 🡪 Z | (P)

Z 🡪 V | F

F 🡪 D | C

C 🡪D.D

V 🡪 L A X

X 🡪 \_ |λ

A 🡪 λA´

A’ 🡪 LA'|DA’|\_LA’|\_DA’| λ

L 🡪 QL’

L’ 🡪QL’| λ

Q = [a-z A-Z]

D 🡪 ÑD’

D’ 🡪ÑD’| λ

Ñ= [0,1,2..9]

**Hallamos los primeros**

Prim(S) = prim(V) = prim(L) = prim(Q) = { [ }

Prim(w) = Prim(S) = prim(V) = prim(L) = prim(Q) = { [ }

Prim(R) = { > }

Prim(O) = { &, |}

Prim(P) = Prim(T) = prim(K) = prim(B) = {- , j}

Prim(p’) = {+ , - , λ }

Prim(T) = prim(K) = prim(B) = {- , J}

Prim(T’) = {\*, /, λ}

prim(K) = prim(B) = {- , j}

prim(K’) = {^, λ}

prim(B) = {- , j}

prim(J) = prim(Z) = prim(V) = prim(L) = prim(Q) = { [ }

prim(J) = { ( }

prim(Z) = prim(V) = prim(L) = prim(Q) = { [ }

Prim(F) = Prim(D) = Prim(Ñ) = { [ }

Prim(C)= Prim(D) = Prim(Ñ) = { [ }

Prim(V) = Prim(L) = Prim(Q) = { [ }

Prim(X) { \_, λ }

Prim(A) = { λ}

Prim(A’) = prim(L) = prim(Q) = { [ }

Prim(A’) = Prim(D) = Prim(Ñ) = { [ }

Prim(A’) = { \_ , \_ , λ}

Prim(L) = Prim(Q) = { [ }

Prim(L’) = Prim(Q) = { [ }

Prim(L’) = { λ }

Prim(Q) = { [ }

Prim(Q’) = { λ }

Prim(D) = Prim(Ñ) = { [ }

Prim(D’) = Prim(Ñ) = { [ }

Prim(D’) = { λ }

**Hallar los sgte**

sgte(S) = {$, O}

sgte(W) = {$, }

sgte(R) = {$, F, V}

sgte(O) = {$, }

sgte(P) = {$, )}

sgte(P’) = {$, ) }

sgte(T) = {+, - , $ , ) }

sgte(T’) = { +, - , $ , ) }

sgte(K) = { \*, / , $ , )}

sgte(K’) = { \*, / , $ , )}

sgte(B) = { $, Z, ) }

sgte(J) = { $, }

sgte(Z) = {$ , V, F}

sgte(F) = {$, D, C}

sgte(C) = {$, }

sgte(V) = { $ , L}

sgte(X) = {$, \_ }}

sgte(A) = { $, }

sgte(A’) = { $, }

sgte(L) = {$, }

sgte(L’) = { $, }

sgte(Q) = { [, $}

sgte(D) = {$, }

sgte(D’) = { $, }

sgte(Ñ) = { [, $}