

T = {HASTA, DESDE, MIENTRAS, PARA, INCREMENTO, ENTERO, (, ), {, }, principal, DECIMAL, CHAR, BOOLEANO, CADENA, id, +, -, /, \*, ^, OLN, OL, OR, imprimir, leer, TD, HACER, SI, SINO\_SI, SINO, = }

NT = {P, PRINCIPAL, CODIGO, CODE, C, DECLARAR\_VAR, VAR\_DECLARADA, WH, DWH, IF, FOR, IMPRI, BODY\_IMPRI, FIN\_IMPRI}

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P-> PRINCIPAL CODIGO

PRINCIPAL -> principal ( )

CODIGO -> {C}

C -> CODE C

|  $\epsilon$

CODE-> DECLARAR\_VAR

| VAR\_DECLARADA

| WH

| DWH

| IF

| FOR

| IMPRI

| LEER

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IMPRI -> **imprimir** BODY\_IMPRI

BODY\_IMPRI -> (**VALOR** FIN\_IMPRI

FIN\_IMPRI -> **+** VALOR FIN\_IMPRI

| **)** ;

LEER -> **leer** BODY\_LEER ;

BODY\_LEER -> (**id**)

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WH-> **MIENTRAS** CONDICION CODIGO

DWH-> HACER\_BLOCK MIENTRAS\_BLOCK

HACER\_BLOCK -> **HACER** CODIGO

MIENTRAS\_BLOCK -> **MIENTRAS** CONDICION;

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IF-> **SI** IF\_BODY END\_IF

IF\_BODY -> CONDICION CODIGO

END\_IF -> **SINO\_SI** IF\_BODY END\_IF |

**SINO** CODIGO |

**ε**

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FOR-> DESDE\_BLOCK HASTA\_BLOCK INCREMENTO\_BLOCK

DESDE\_BLOCK -> DESDE DECLARAR\_VAR

HASTA\_BLOCK -> HASTA CONDI

INCREMENTO\_BLOCK -> INCREMENTO ENTERO CODIGO

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DECLARAR\_VAR -> TD BODY\_VAR FIN\_VAR

BODY\_VAR -> id ASIG

ASIG -> = VALOR

|  $\epsilon$

FIN\_VAR -> , BODY\_VAR FIN\_VAR

| ;

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VAR\_DECLARADA -> id CHANGE\_VALOR ;

CHANGE\_VALOR -> OP\_INC\_DEC

| = VALOR

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CONDI -> NOT CONDI\_BODY CONDI2

CONDI\_BODY -> VALOR SEG\_DATO

SEG\_DATO -> OR NOT VALOR

|  $\epsilon$

CONDI2 -> OL CONDI\_BODY CONDI2

|  $\epsilon$

NOT -> !

|  $\epsilon$

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CONDICION -> (CONDI)

---

VALOR -> M SUMA

SUMA -> + M SUMA

| - M SUMA

|  $\epsilon$

M-> P MULTI

MULTI -> \* P MULTI

| / P MULTI

|  $\epsilon$

P -> S POTENCIA

POTENCIA ->  $\wedge$  P

|  $\epsilon$

S -> ASIG\_VALOR

| - ASIG\_VALOR

ASIG\_VALOR ->

ENTERO

| DECIMAL

| CHAR

| BOOLEANO

| CADENA

| id

| (VALOR)

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