**NOMBRE:**

**1.**

**2.**

**3.**

**E**  **T ^ E T** **T . F F** **id**

**| T | F | F ( )**

**| \* F**

**| ( E )**

**4. E  T E' T   id**

**E'  T E'   ( E )**

**T E'**

****

**RELLENA LA TABLA**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | # | **(** | **)** | **id** | **+** | **** |
| E |  |  |  |  |  |  |
| E' |  |  |  |  |  |  |
| T |  |  |  |  |  |  |

**Analiza esta entrada**: **id + id   id**

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| --- | --- | --- |
| **Pila** | **Entrada** | **Acción** |
| **E #** | **id + id   id #** |  |
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**La gramática genera esta entrada?**

**5.** (1) D  T **id** L

(2) T  int

(3) T  float

(4) L  **, id** L

(5) L  **;**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ESTADO | acción | | | | | | goto | | |
| int | float | id | , | ; | $ | D | T | L |
| 0 | s3 | s4 |  |  |  |  | 1 | 2 |  |
| 1 |  |  |  |  |  | aceptar |  |  |  |
| 2 |  |  | s5 |  |  |  |  |  |  |
| 3 |  |  | r2 |  |  |  |  |  |  |
| 4 |  |  | r3 |  |  |  |  |  |  |
| 5 |  |  |  | s7 | s8 |  |  |  | 6 |
| 6 |  |  |  |  |  | r1 |  |  |  |
| 7 |  |  | s9 |  |  |  |  |  |  |
| 8 |  |  |  |  |  | r5 |  |  |  |
| 9 |  |  |  | s7 | s8 |  |  |  | 10 |
| 10 |  |  |  |  |  | r4 |  |  |  |

**Analiza esta entrada: int id , id , id ;**

|  |  |  |
| --- | --- | --- |
| **Pila** | **Entrada** | **Acción** |
| **0** | **int id , id , id ; $** |  | |
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**La gramática genera esta entrada?**

**6.**

1. a := a \* a
2. b := b \* b
3. t1 := a + b
4. t2 := t1 - a
5. t3 := t1 + t2
6. t2 := a \* t3
7. c := t1

|  |  |  |  |  |  |  |  |  |
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| **a** |  |  |  |  |  |  |  |  |
| **b** |  |  |  |  |  |  |  |  |
| **c** |  |  |  |  |  |  |  |  |
| **t1** |  |  |  |  |  |  |  |  |
| **t2** |  |  |  |  |  |  |  |  |
| **t3** |  |  |  |  |  |  |  |  |

Visto el resultado, ¿se podría decir que hay código muerto? Justifica tu respuesta

**7.**

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| **Instrucción** | **Código generado** | **Descriptor de registros** | **Descriptor de direcciones** |
|  |  | R0: vacío  R1:vacío | a,b,c:en memoria |
| 1)t1:= a - b (t1,v,2)  (a,m)  (b,v,5) |  |  |  |
| 2)a:= t1 - c (a,v,3)  (t1,m)  (c,v,3) |  |  |  |
| 3)t2:= a - c (t2,v,4)  (a,v,5)  (c,m) |  |  |  |
| 4)c:= t2 (c,v,5)  (t2,m) |  |  |  |

**8.**

|  |  |  |
| --- | --- | --- |
| struct expresionstruct {  string nombre ;  vector<int> trues ;  vector<int> falses ;  }; | %union {  expresionstruct \*expr ;  int number ;  vector<int> \*lisEnt ;  } | %type <expr> expr  %type <number> M  %type <lisEnt> N |

stmt : RIF expr

{codigo.completarInstrucciones($2->trues,$4) ;

codigo.completarInstrucciones($2->falses,$8) ; }

RTHEN stmts M

RELSE N stmts RENDIF

{ codigo.completarInstrucciones(\*$6, $10) ;

delete $2 ; }

;

M: { $$ = codigo.obtenRef() + 1; }

;

N: { $$ = new vector<int>;

$$->push\_back(codigo.obtenRef()) ;

codigo.anadirInstruccion("goto"); }

;

**9.**