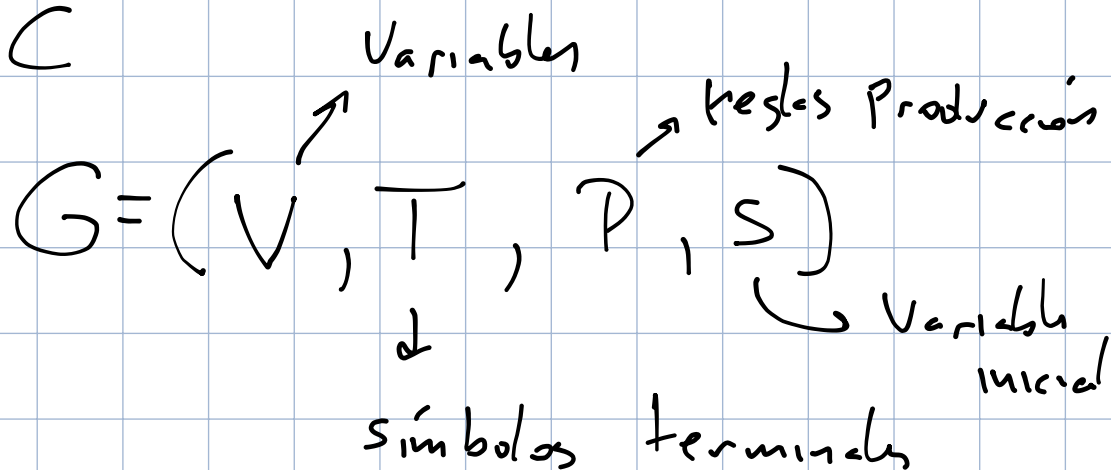


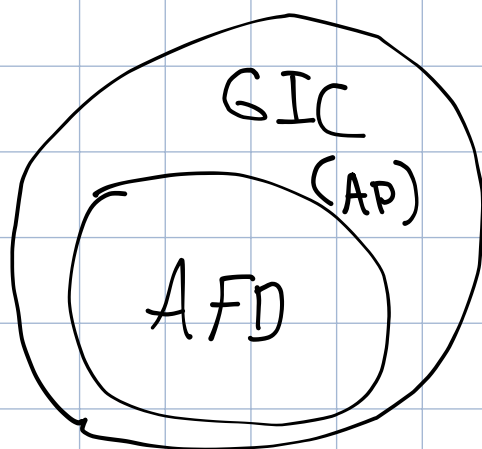
GIC



Σ , palindromos $\{0, 1\}$

$P \rightarrow \epsilon \mid 0 \mid 1$

$P \rightarrow 0P0 \mid 1P1$



01010 \rightarrow evaluar palíndromo

$P \Rightarrow 0P0 \Rightarrow 01P10 \Rightarrow 01010$ ✓

Arboles de derivación

dato GIC

$$G = (V, T, P, S)$$

1. nodos están etiquetados
con variables

2. hijos $\in \{T, V\}$

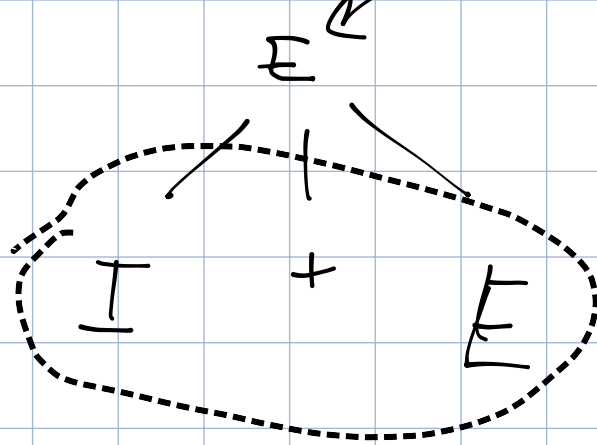
3. si un nodo A
y sus hijos X_1, X_2, \dots, X_k

entonces

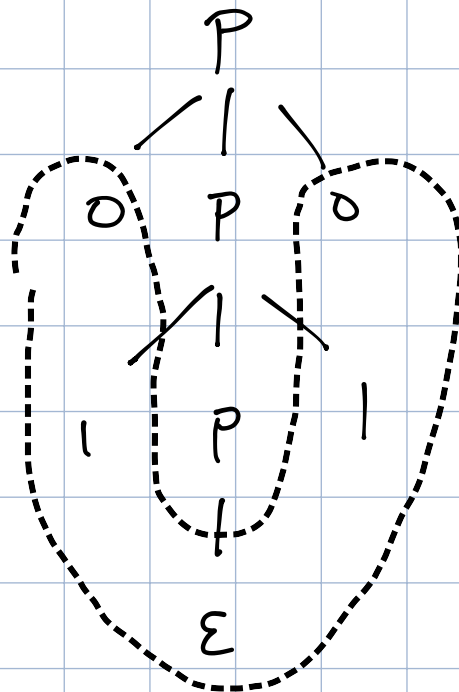
$$X_1 X_2 \dots X_k \text{ es una}$$

Producción

$$E_j: E \xRightarrow{*} I + E$$

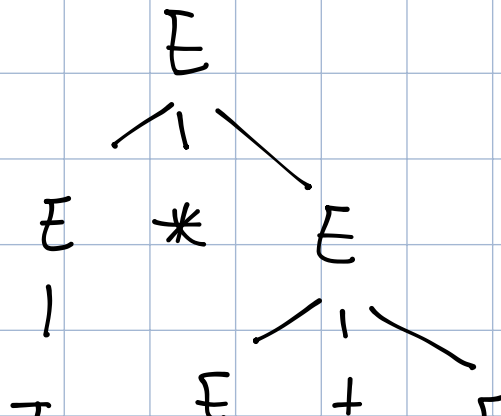


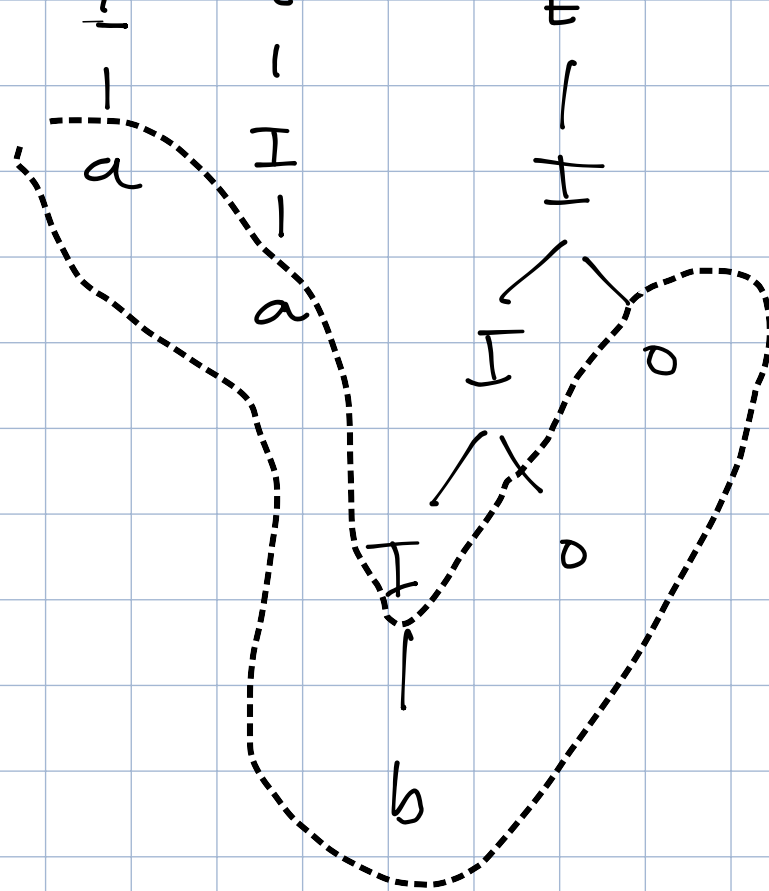
$$E_j \quad P \stackrel{*}{\Rightarrow} 0110$$



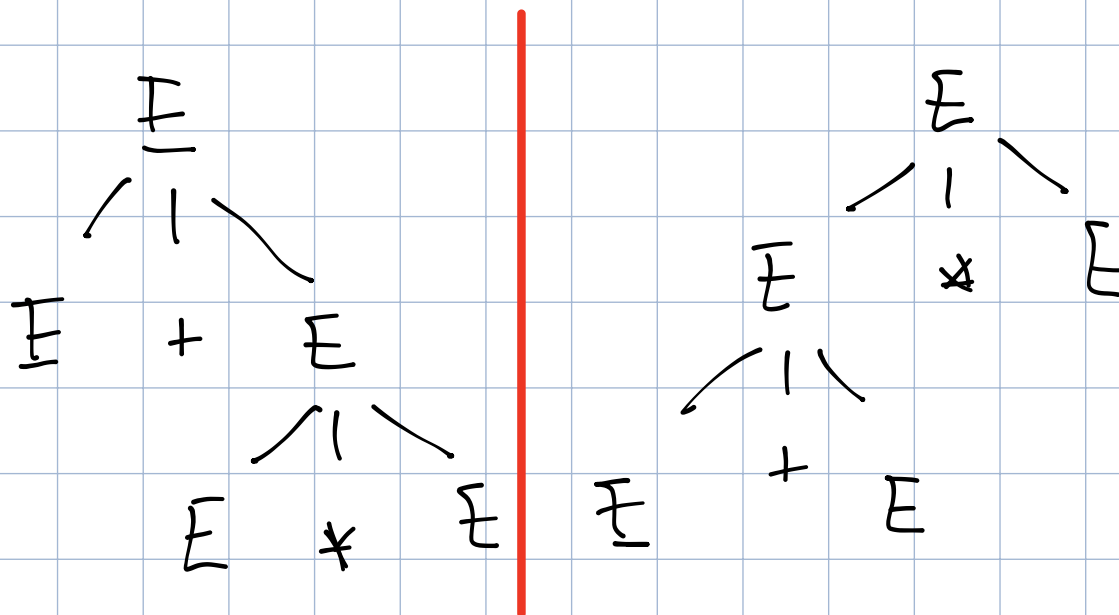
0110

$$E_j: \quad a * (a + b00)$$



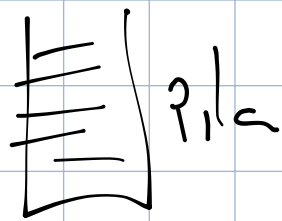


Ex: $E \rightarrow E + E * E$



$E \Rightarrow E + E \Rightarrow E + E * E$ ✓

$E \Rightarrow E * E \Rightarrow E + E * E$ ✓



Formalmente.

$$P = (Q, \Sigma, \Gamma, \delta, q_0, Z_0, F)$$

$Q \sim$ estados

$\Sigma \sim$ alfabeto

$\Gamma \sim$ "alfabeto" de pila

$$\delta \sim \delta: Q \times \Sigma \times \Gamma \rightarrow Q \times \Gamma$$

$$\begin{array}{ccccc} \delta(q, a, X) \rightarrow (p, \gamma) & & & & \\ \swarrow \quad \downarrow \quad \downarrow \quad \searrow & & & & \swarrow \text{Cadena Push} \\ \text{estado} \quad \text{símbolo} \quad \text{tapa de pila} \quad \text{estado} & & & & \sim \text{pila} \end{array}$$

$$q_0 \sim \text{estado inicial} \quad \boxed{\begin{array}{l} \gamma = \epsilon \\ \gamma = X \\ \gamma = YZ \\ \quad \quad \quad \cancel{Z=X} \end{array}}$$

$Z_0 \sim$ símbolo inicial de pila.

$F \sim$ conjunto de estados finais.

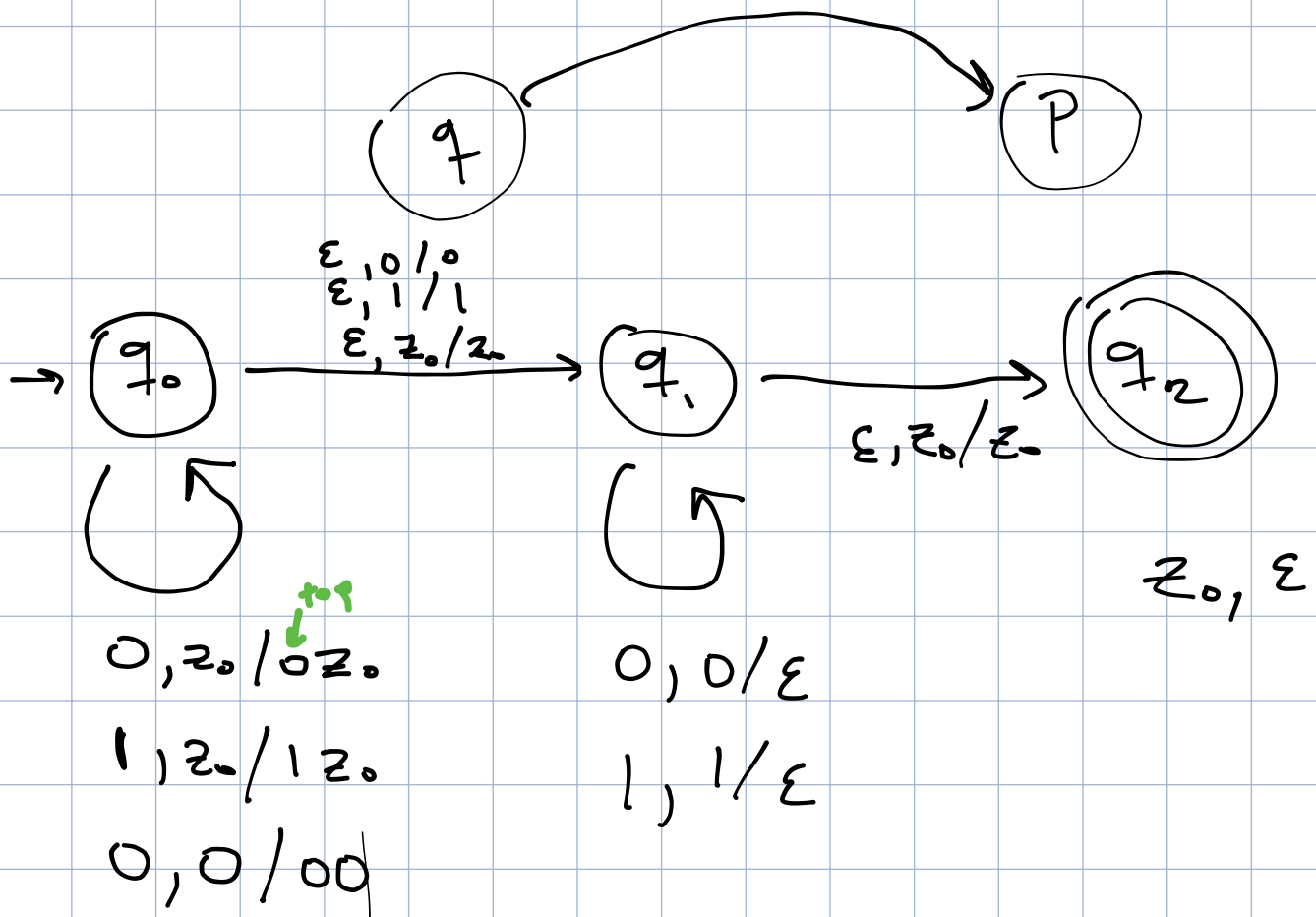
AFN - $\epsilon \rightarrow$ pega pila.

Ex: $L_{ww^R} = \{ ww^R \mid w \in (0+1)^* \}$

010, 111, 010010

$$\delta(q, a, x) \rightarrow (p, d)$$

$a, x/d$



0, 1 / 01

1, 0 / 10

1, 1 / 11

$$\{ww^R \mid w \in (0+1)^*\}$$

descripción instantánea

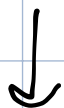
$$\begin{array}{ccc} (q, \underline{aw}, \underline{x\beta}) & \vdash & (p, w, \alpha\beta) \\ \downarrow \text{estados} & & \downarrow \text{estados} \end{array}$$

1111

$$(q_0, \underline{1111}, z_0)$$



$$(q_0, 111, 1z_0)$$



$$(q_0, 11, 11z_0)$$



$$(q_0, 1, 111z_0)$$



$$(q_1, 1111, z_0)$$



$$(q_1, 111, 1z_0)$$



$$(q_2, 1111, z_0)$$

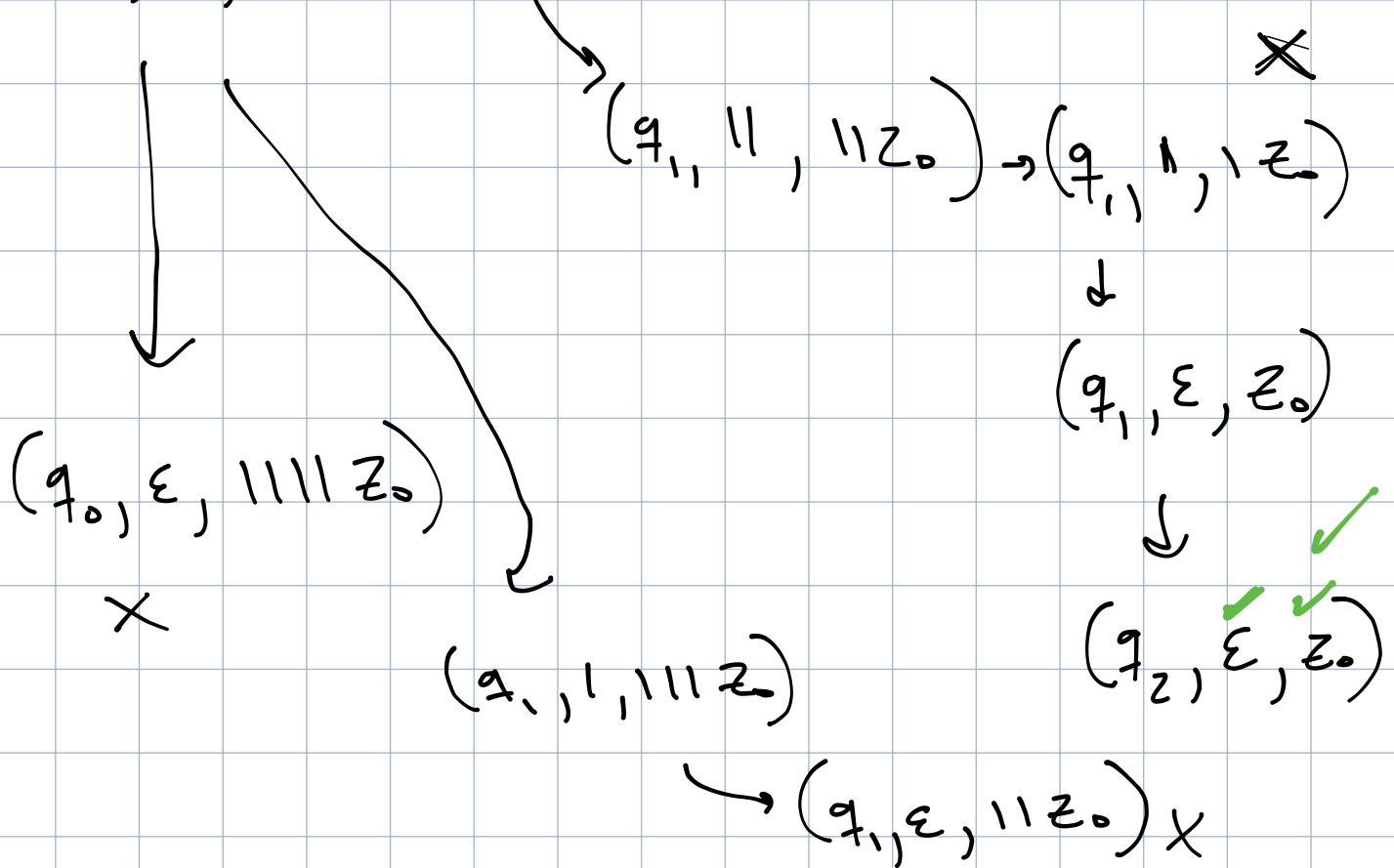
×

$$(q_1, 11, z_0)$$

×



$$(q_2, 11, z_0)$$

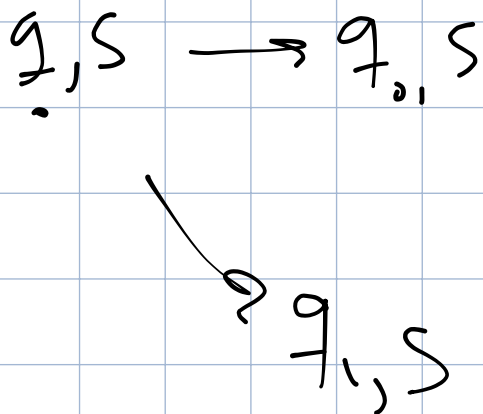
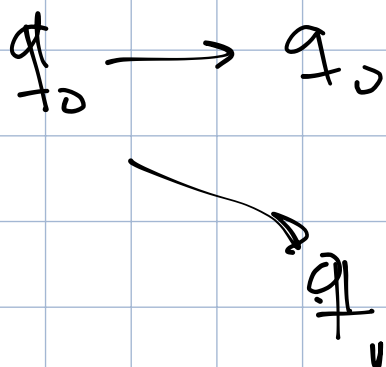


aceptar

1. estado final

2. no hay mas símbolos caben ε

3. Pila Vacía (z_0)



Closure $\rightarrow \{\{q_0, s\}, \{q_1, s\}, \{q_2, s\}\}$

$\{0, 0, 1, 2\}$

\wedge
 δ $\{\{0, s\}, \{0, s\}, \{1, s\}, \{2, s\}\}$

$\{0, 1, 2, 2, 2\}$

\wedge
 $\delta \rightarrow \{\{0, s\}, \{1, s\}, \{2, s\} \dots$