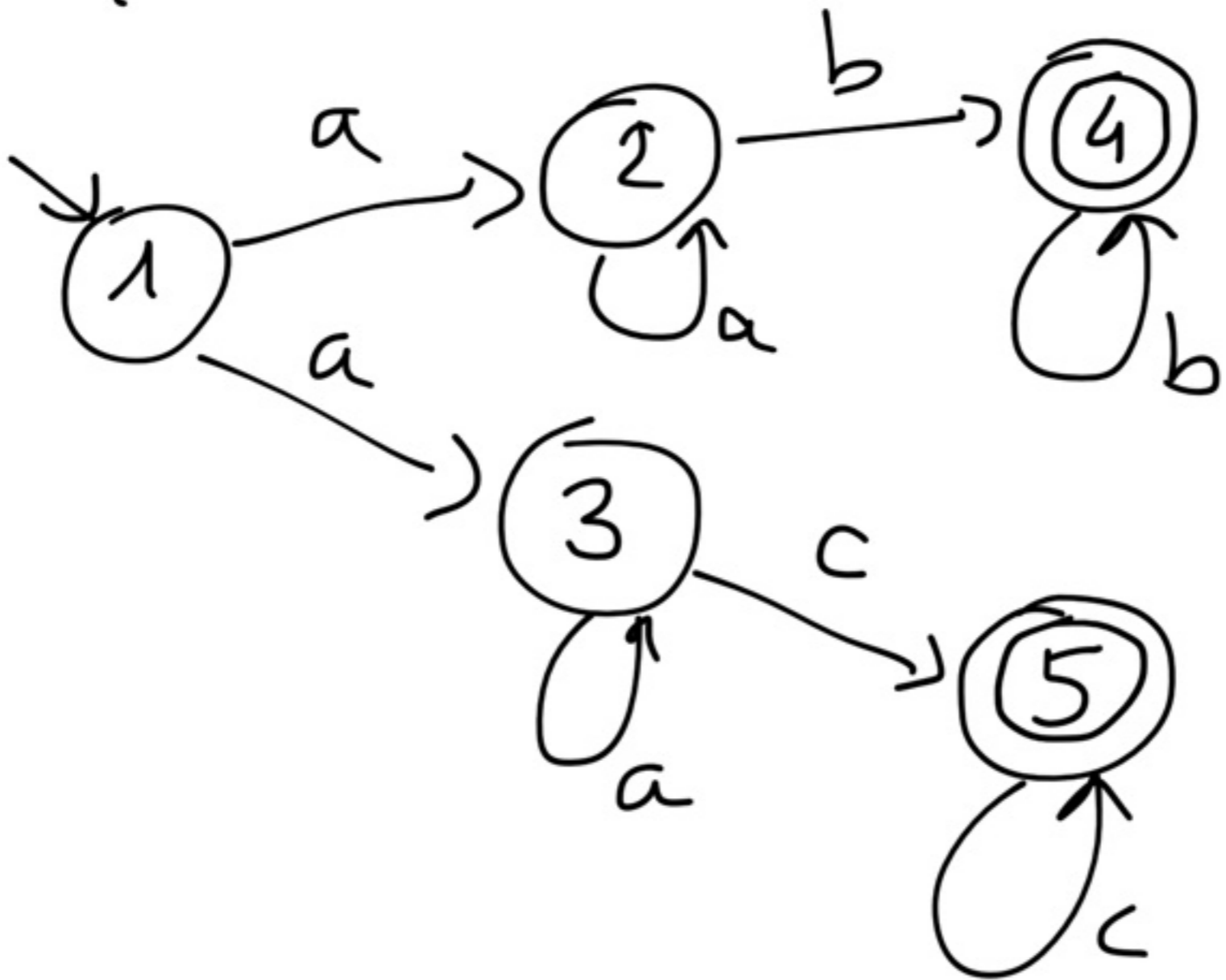
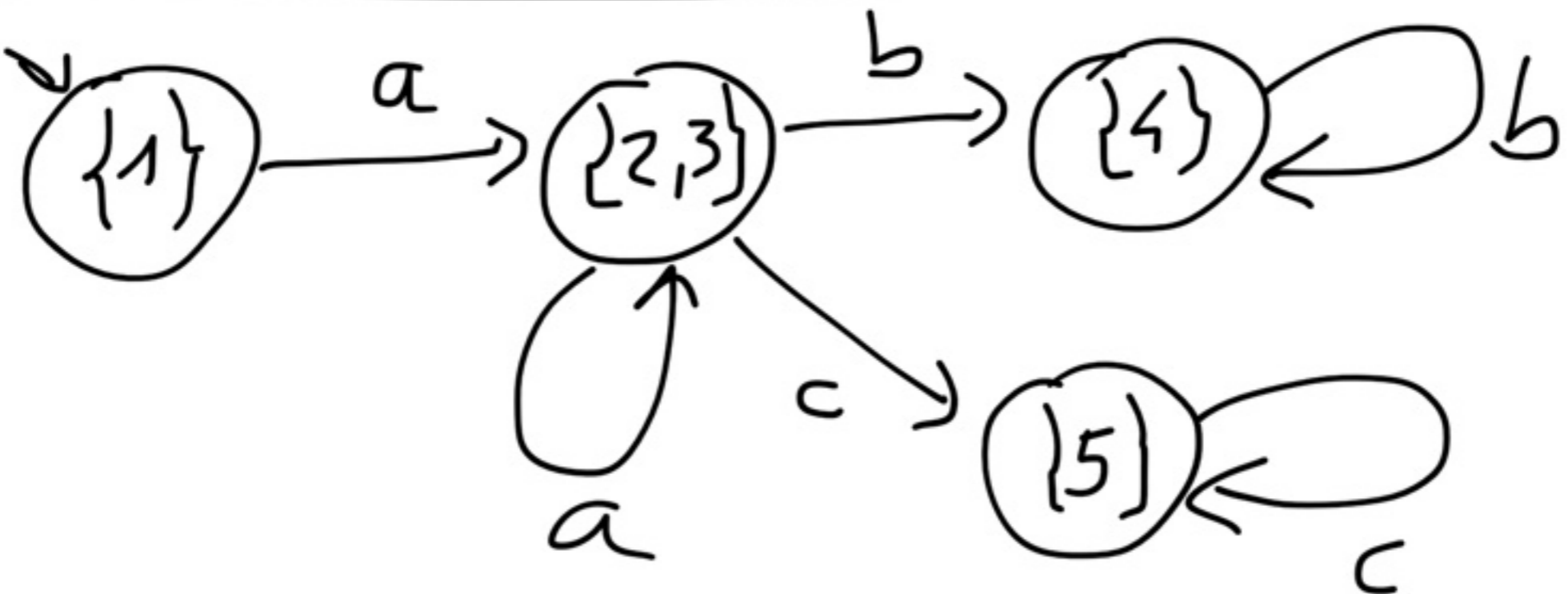
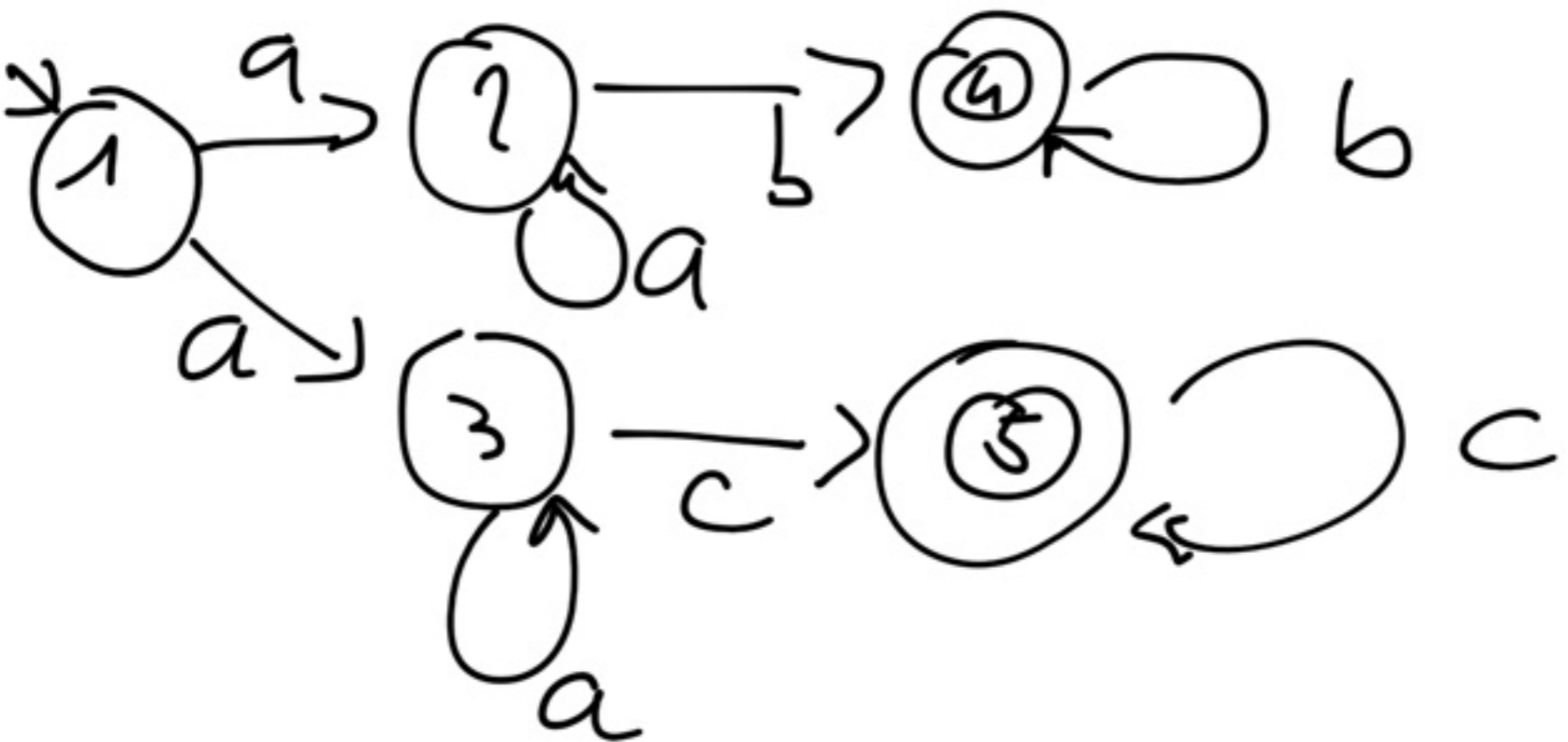
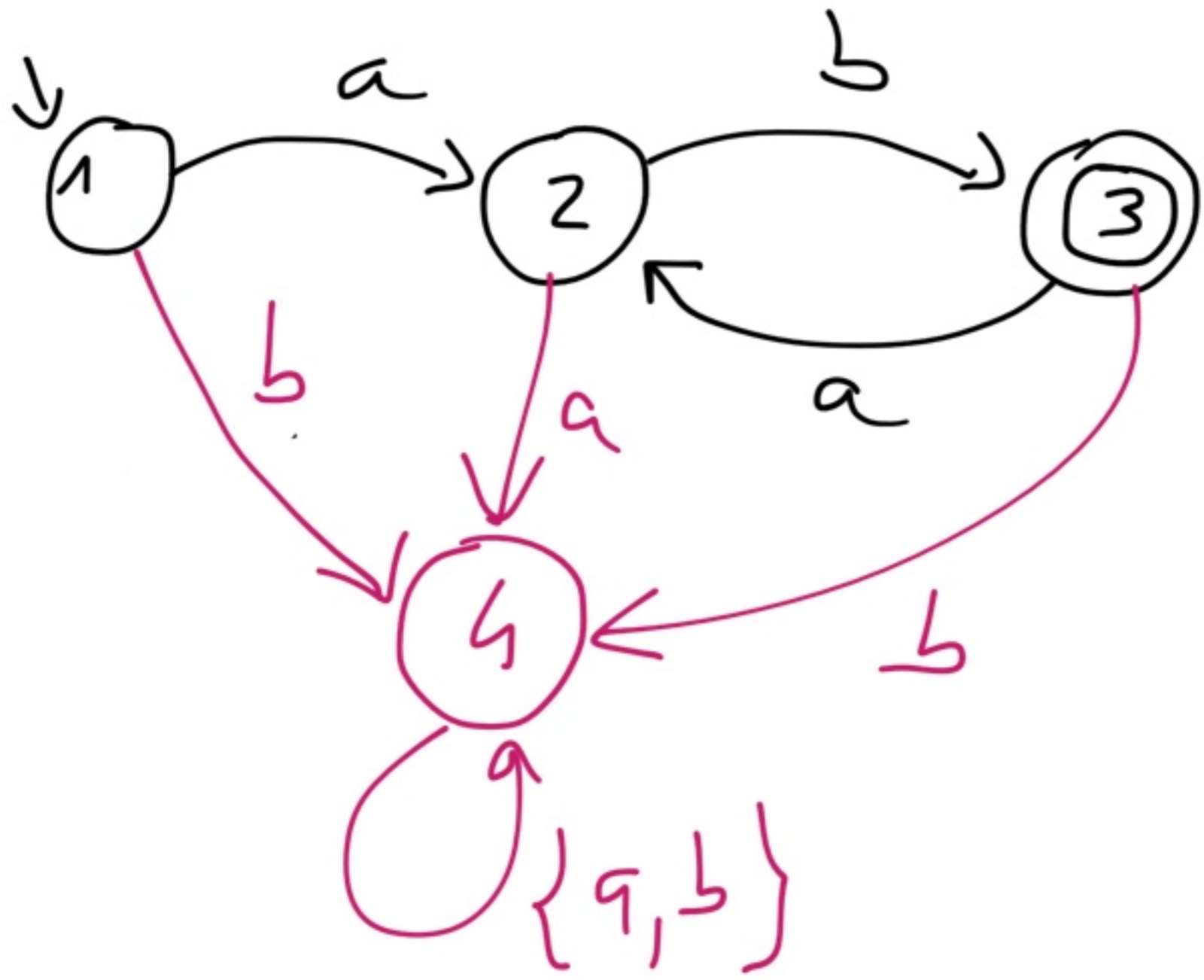


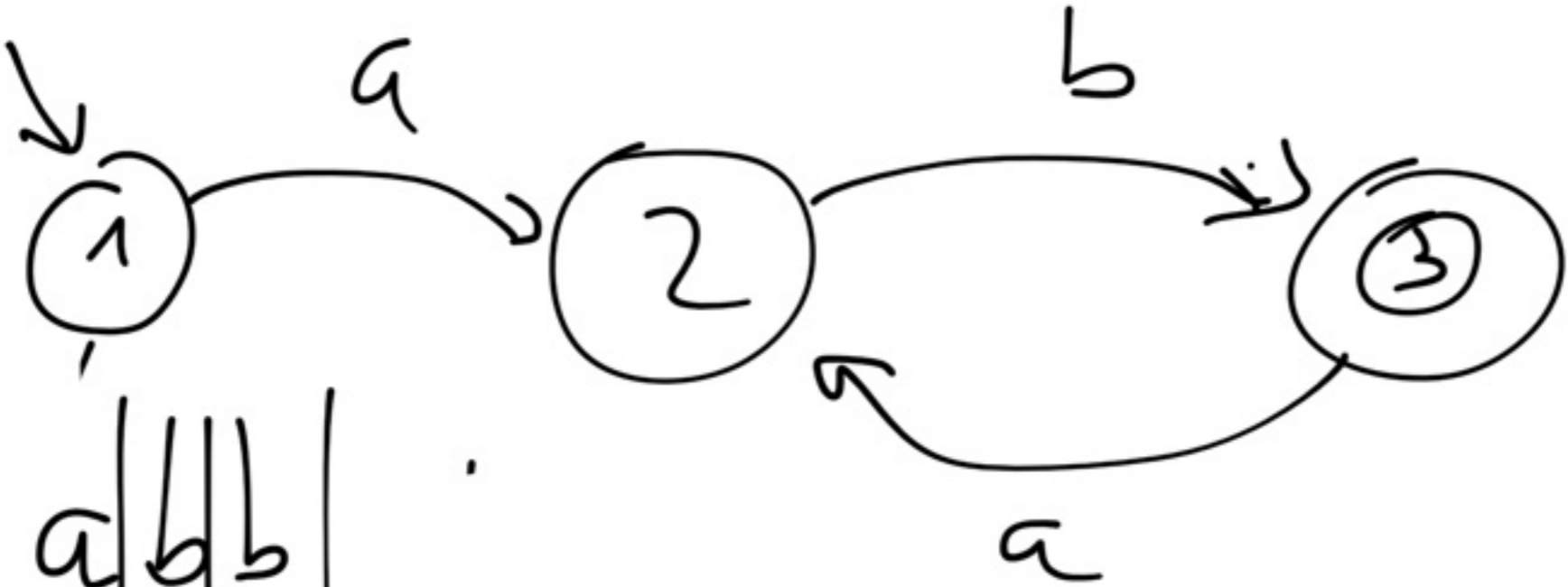
$$L = \{ a^k b^m \mid k, m > 0 \} \\ \cup \{ a^m c^m \mid m > 0 \}$$





$$L = \{(ab)^m \mid m > 0\}$$

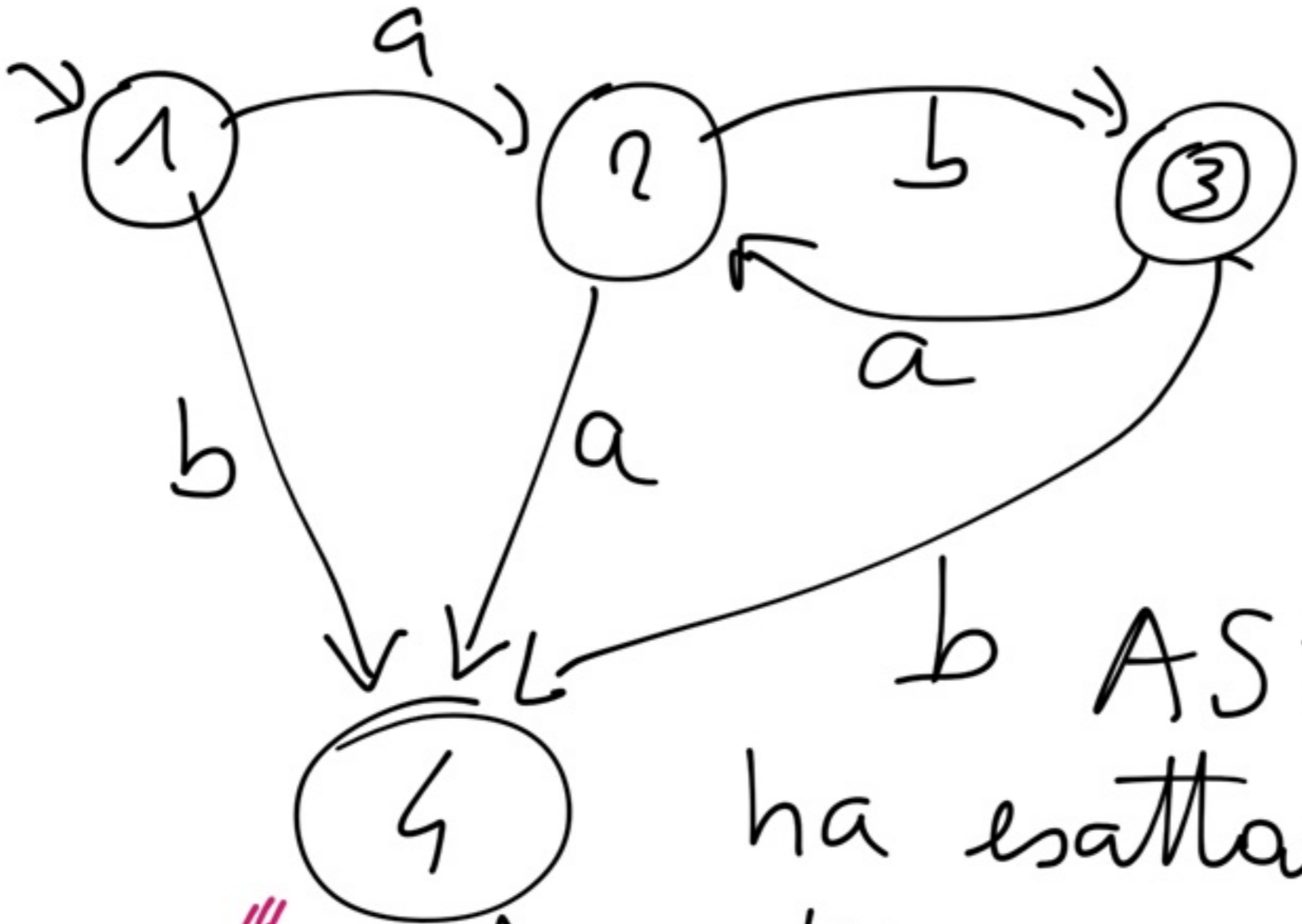




a	b	b	
1	2	3	=

ASFD ha al più

un arco uscente da ogni stato per ogni simbolo di  $\Sigma$



a	b	b	
1	2	3	4

b ASFD

ha esattamente un anco uscente

da ogni stato per

$\{a, b\}$

$\mathcal{A} = \{a, b\}$

ogni simbolo di  $\mathcal{A}$

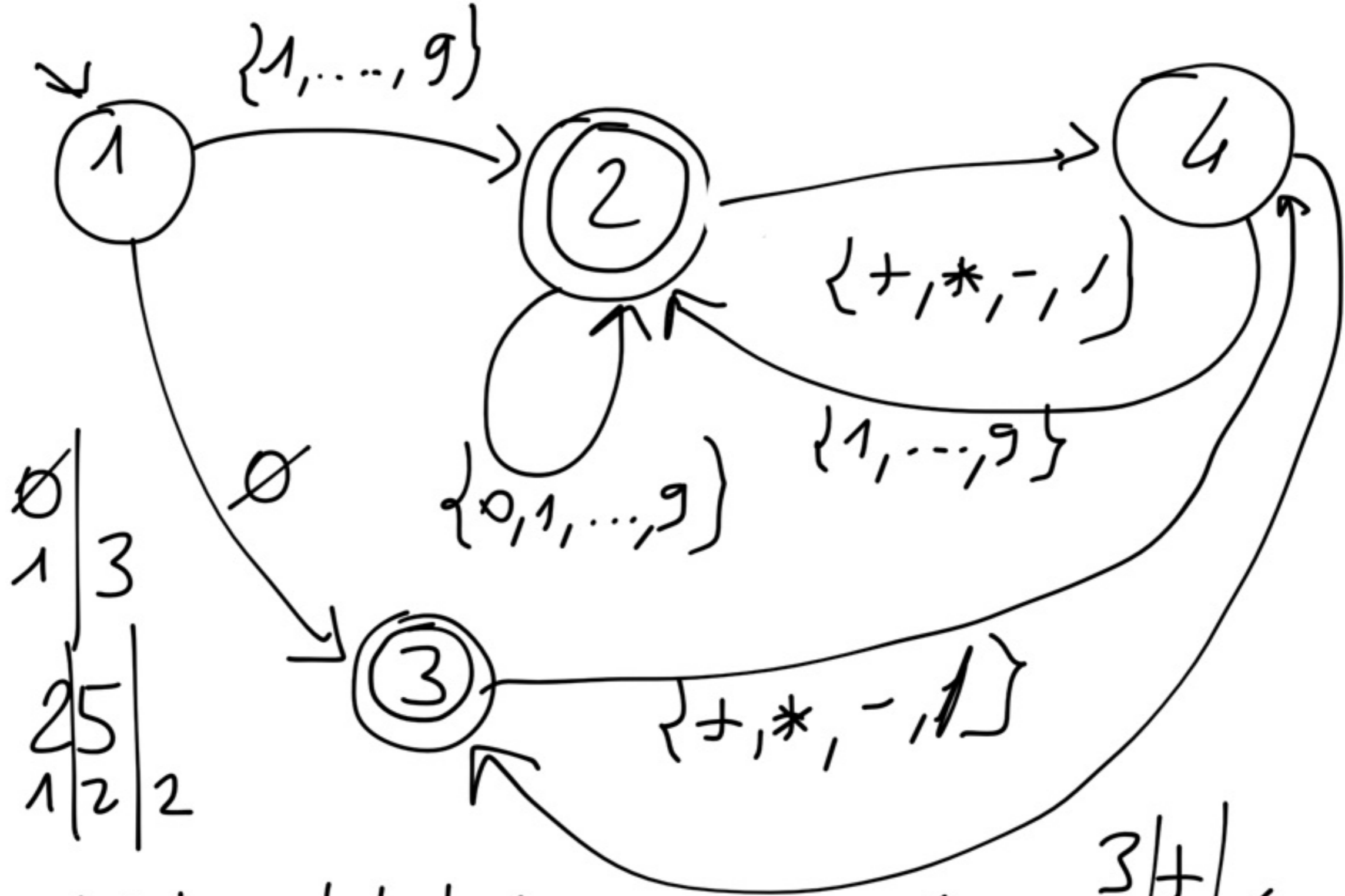
$$3 + 100 * 25 \leftarrow$$

$$\mathcal{L} = \{0, 1, \dots, 9, +, *, /, -\}$$

$$\begin{array}{c} 3 + * 4 \\ | | \end{array}$$

$$\frac{25 + \underline{\underline{002}}}{2}$$

$$25 + \cancel{0} + 3)$$

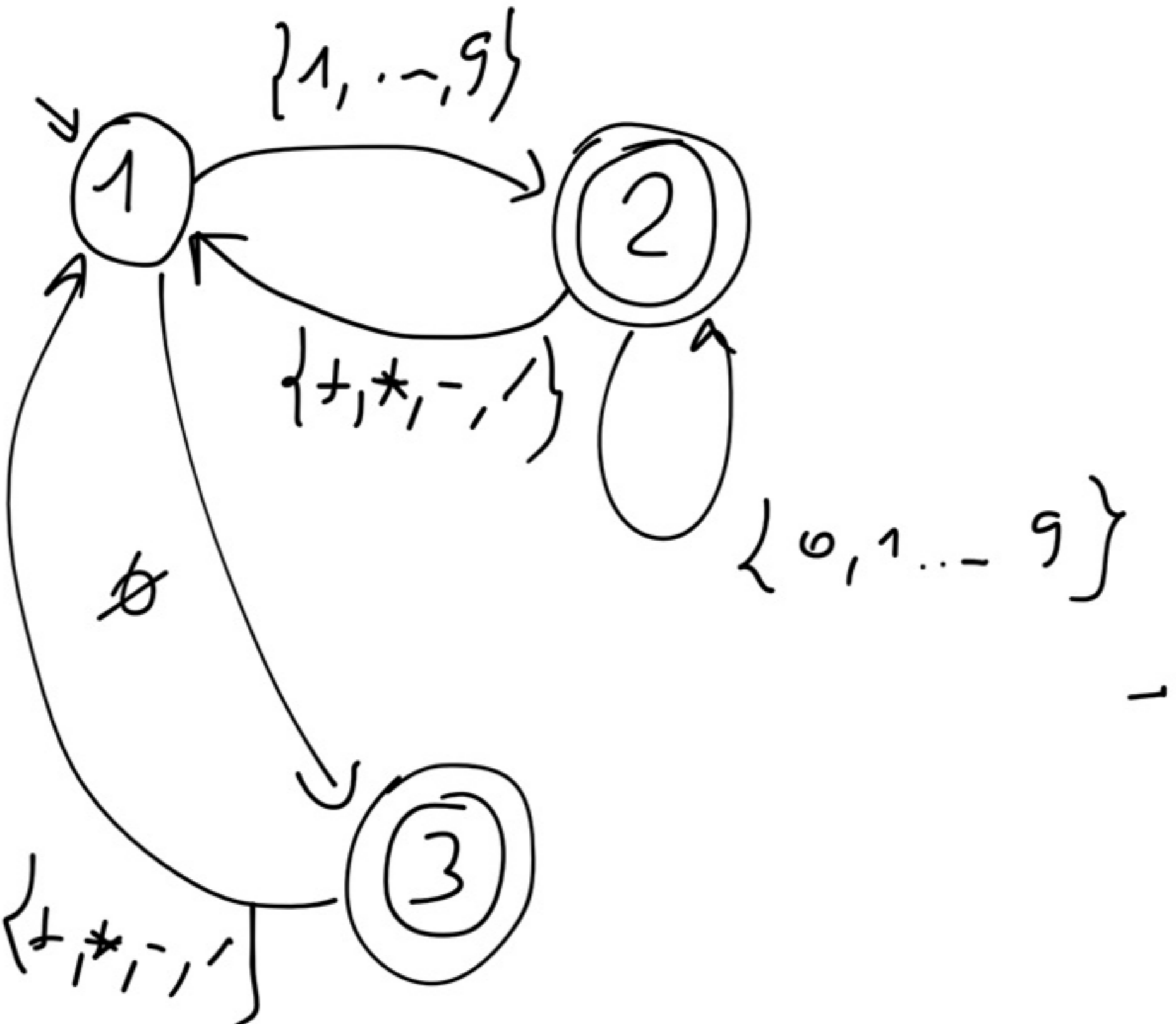


$$\begin{array}{r} \cancel{0} \\ 1 \end{array} \Bigg| \begin{array}{r} 3 \\ \hline 25 \\ 12 \end{array} \Bigg| 2$$

1	0	1	+	1	2	-	3	
1	2	2	2	4	2	2	4	(2)

$$\begin{array}{r} \cancel{0} \\ 0 \end{array} \Bigg| \begin{array}{r} 1 \\ \hline 13 \end{array} \Bigg| + 3$$
  

$$\begin{array}{r} 3 \\ \hline 12 \end{array} \Bigg| + \Bigg| 4$$





$$L = \{ a^m b^m \mid m > 0 \}$$

$$L_1 = \{ a^m b^m \mid m, m > 0 \}$$

$\swarrow$   
 $ab$   
 $abb$   
 $aab$   
 $\vdots$

$ab$   
 $aa\ bb$   
 $aaa\ bbb$   
 $\vdots$

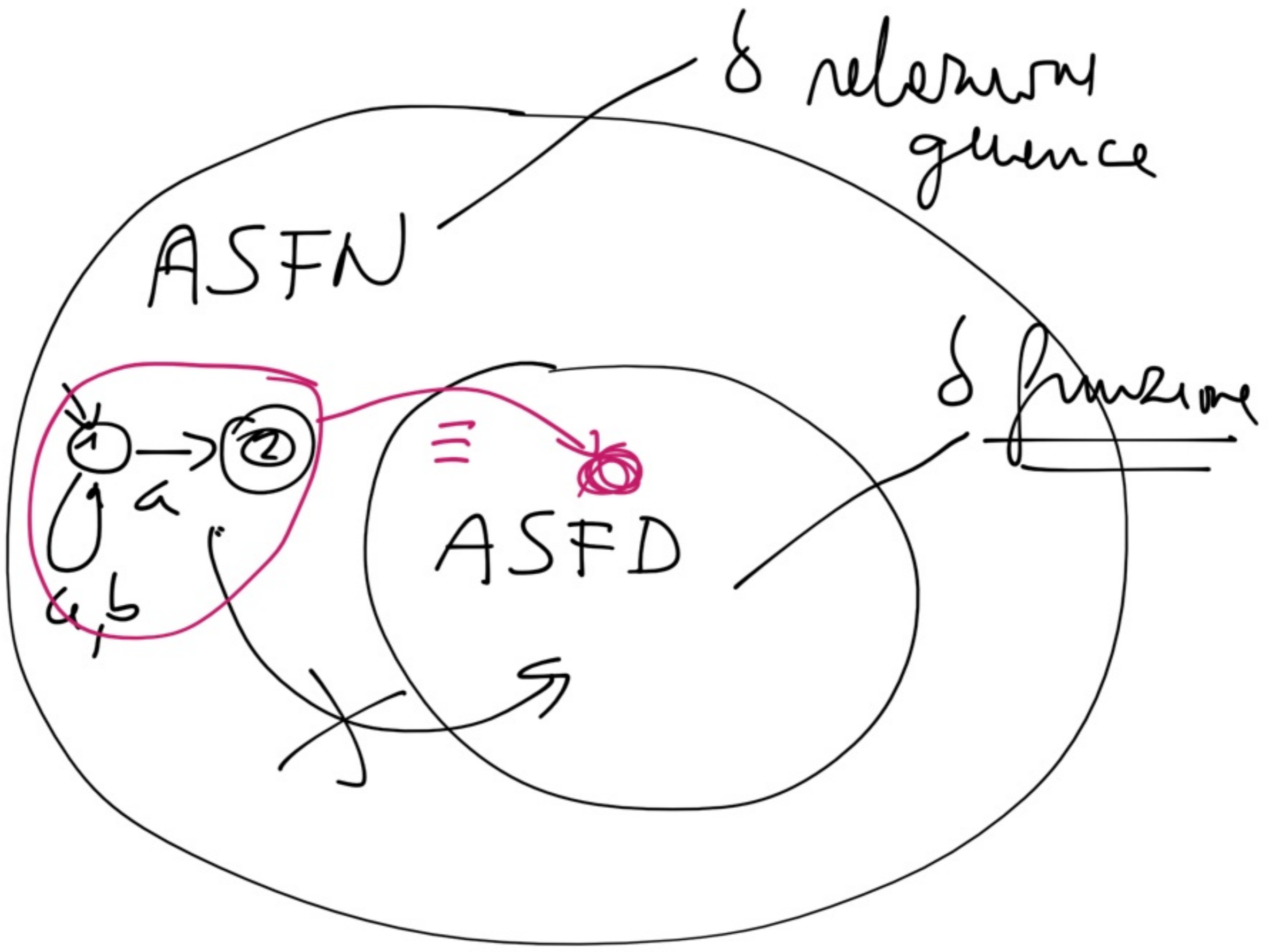
$$L = \{ a^m b^m \mid m > 0 \}$$

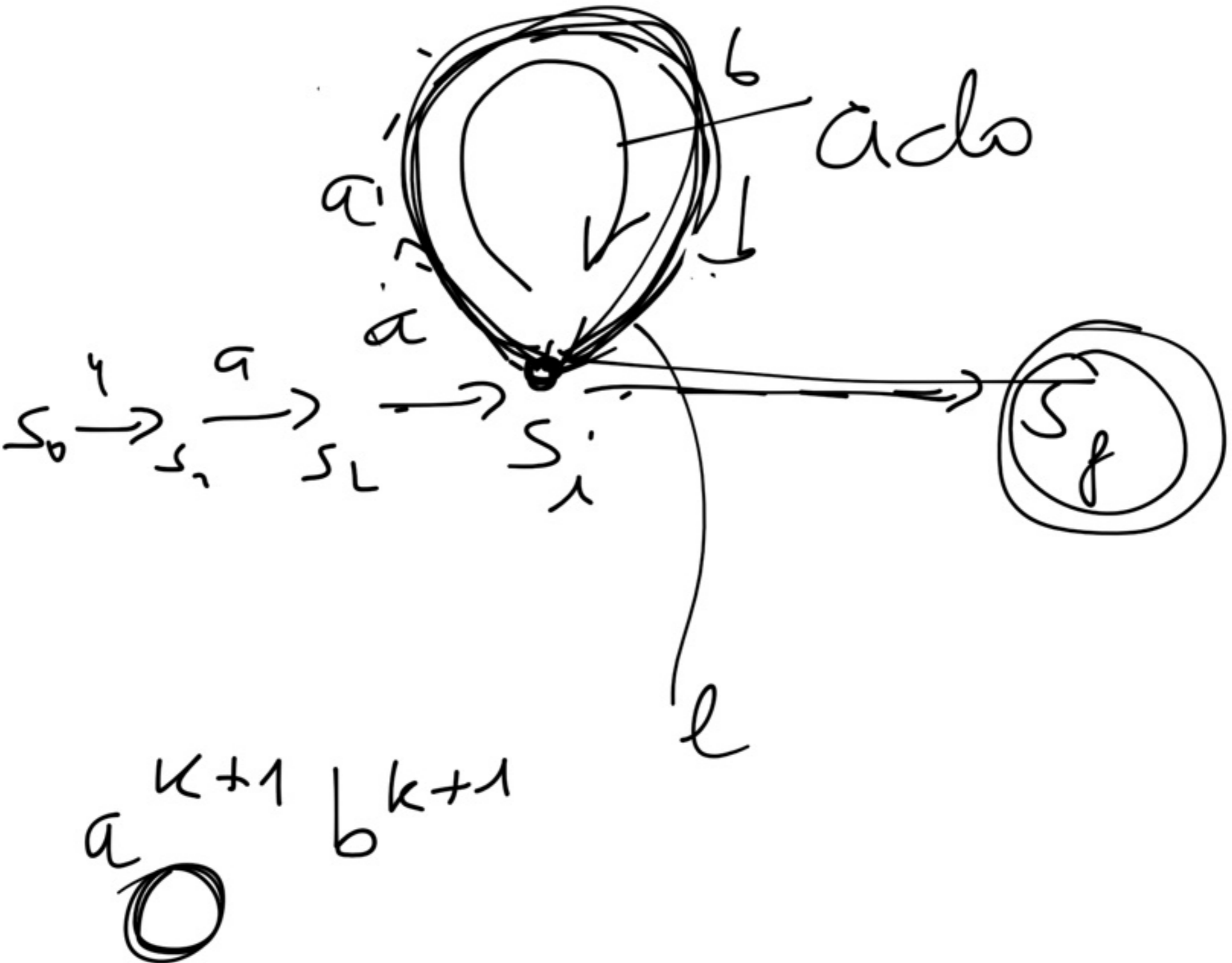
ASFD

$M_1$

$k$  stati

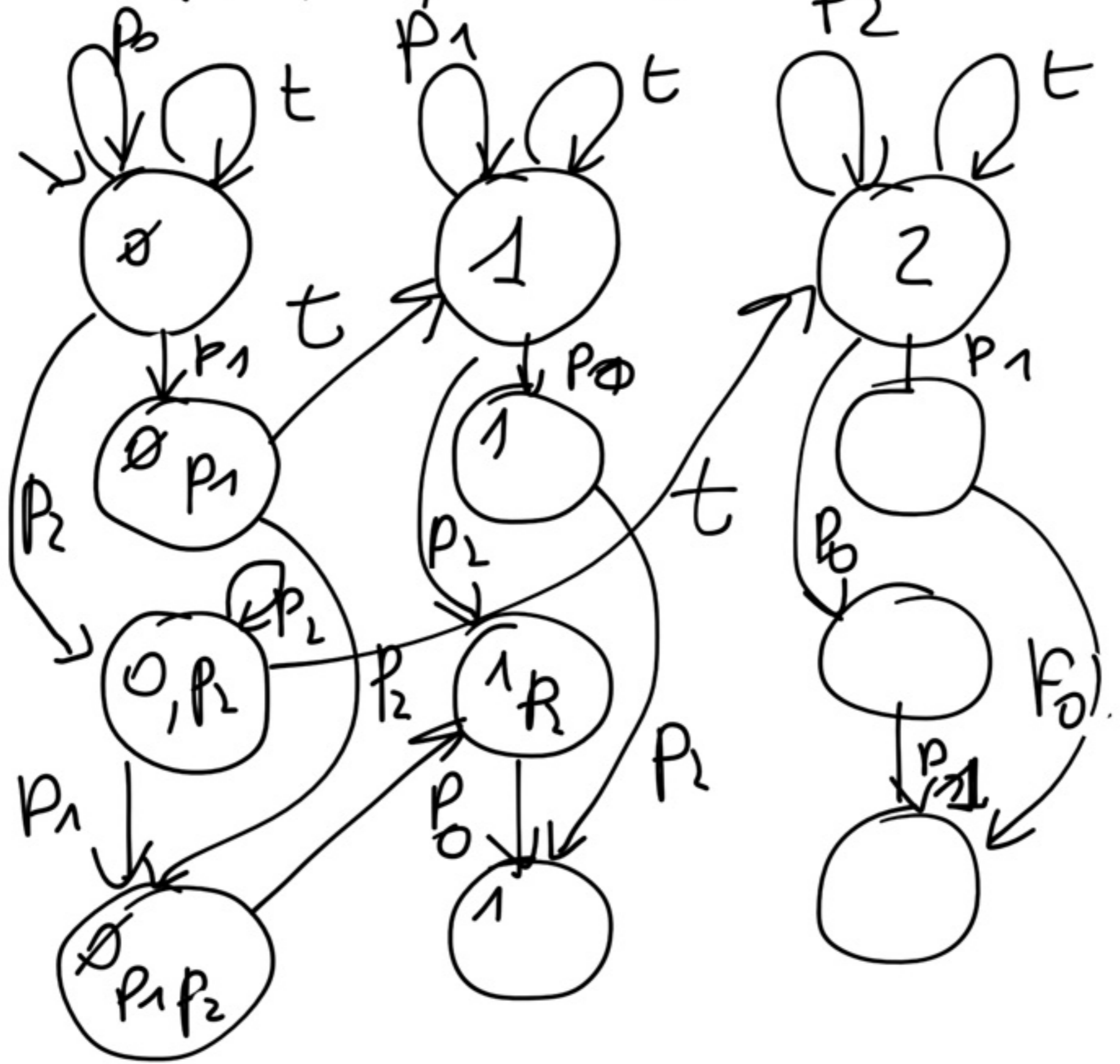
$$a^{k+1} b^{k+1} \in L$$





5

$$\mathcal{L} = \{p_0, p_1, p_2, t\}$$



Grammatica  
a strutture di frase

---

A restituzione  
alle

grammatiche

libere dal

contesto

Λ

Frases

→ Soggetti Predicati  
↳ Complementi

Soggetti

→ Articoli Nome

Articoli →

il

| un

| la

$$\Sigma = \{a, b\}$$

$$L = \{a^m b^m \mid m, m > 0\}$$

$$\mathbb{F} \rightarrow S^a S^b$$

$$S^a \rightarrow \textcircled{a} \text{ oppuru } a S^a$$

$$S^a \rightarrow a \quad S^a \rightarrow a S^a \rightarrow a a$$

$$\textcircled{S^a} \rightarrow a \underset{\uparrow}{S^a} \rightarrow a a \underset{\uparrow}{S^a} \rightarrow \textcircled{a a a}$$



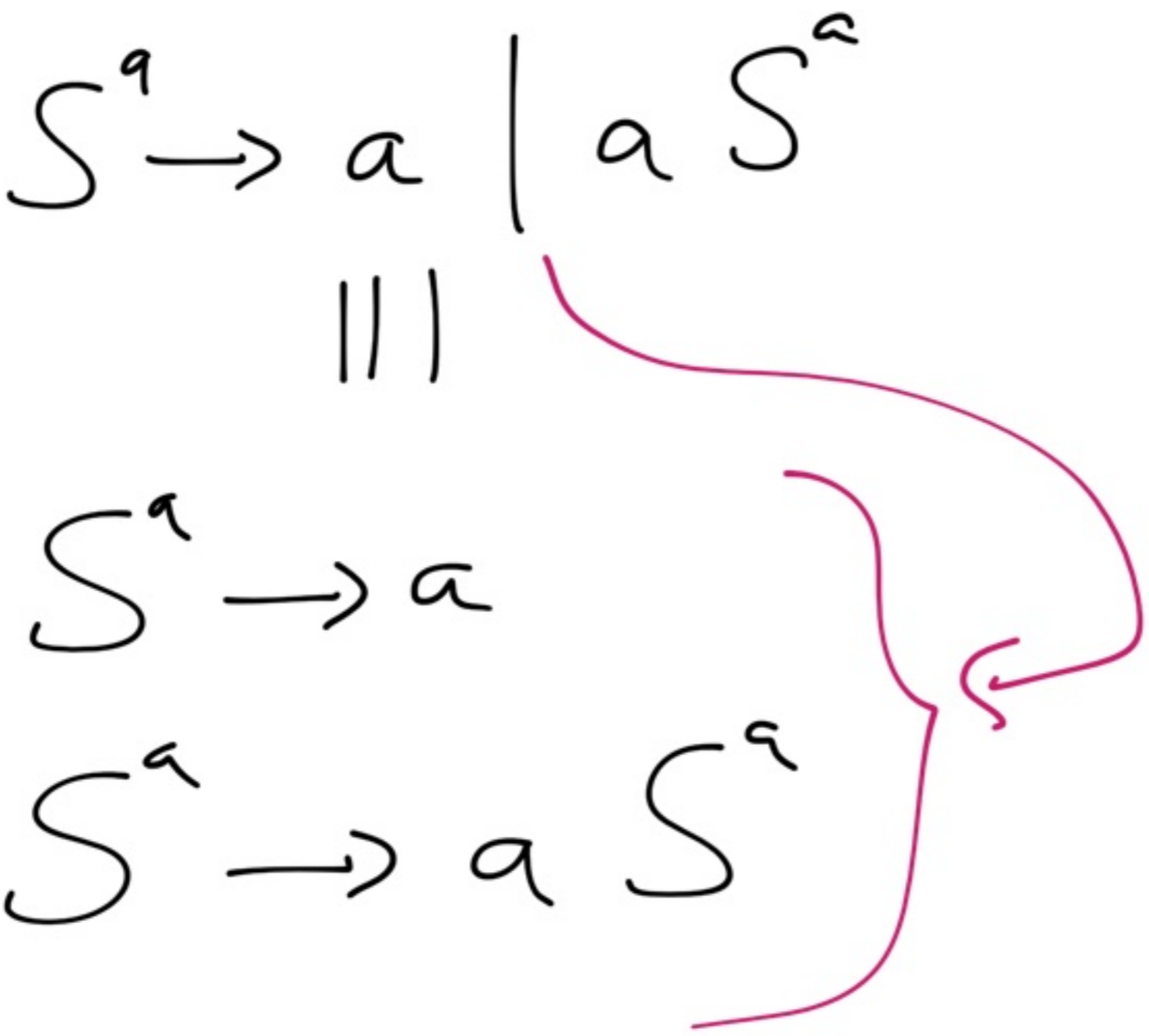
$$\Sigma = \{a, b\}$$

$$L = \{a^m b^m \mid m, m > 0\}$$

$\# \rightarrow S^a S^b$   
 $S^a \rightarrow a \mid a S^a$   
 $S^b \rightarrow b \mid b S^b$

productions

Gram.  
 libre  
 del  
 contexto



$F \rightarrow AB$   
 $A \rightarrow a \mid aA$   
 $B \rightarrow b \mid bB$

$\Sigma = \{a, b\}$   
 $V = \{F, A, B\}$

(insieme punto di simboli)

$F \rightarrow A \$$   
 $A \rightarrow a \mid Aa$   
 $B \rightarrow b \mid Bb$

alfabeto  $\Sigma \cup V$   
 categorie  $\{ \}$   
 sottigliezze

Categoria sottile  
mirabile

SEV

---

Insieme finite  
Alle produzioni

Une production he  
le forme generale

$A \rightarrow \alpha$

$A \in V$

$\alpha \in (N \cup V)^*$

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

$A$  alfabeto

$V$  categ. mutabili

$S \in V$  cat. sint.  
iniziale

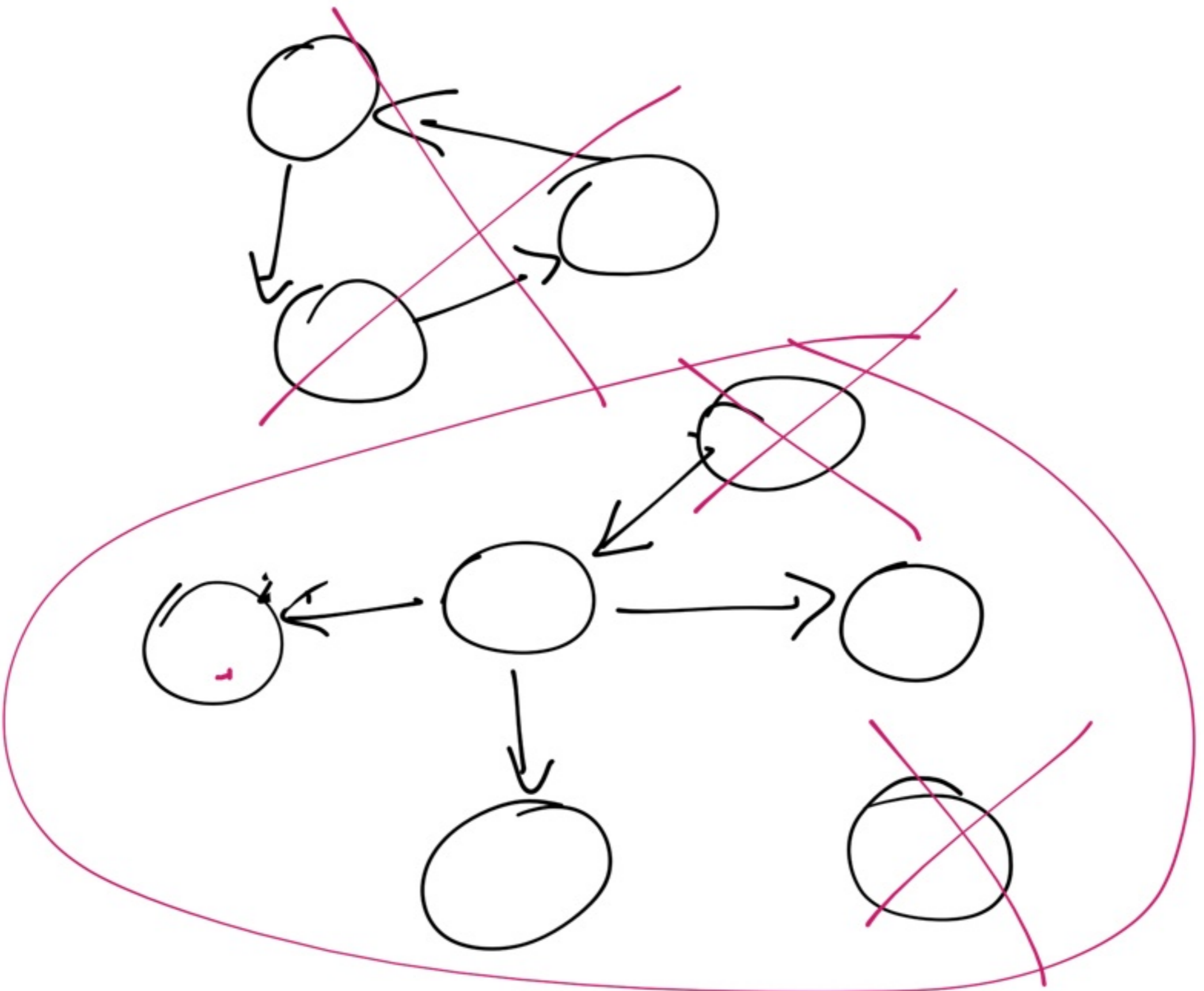
$P$  insieme delle prod.  
delle forme  $A \rightarrow \alpha \mid \alpha \in (A \cup V)^*$   
 $A \in V$

Alberi di derivazione  
rispetto a una  
grammatica  $G$ .

---

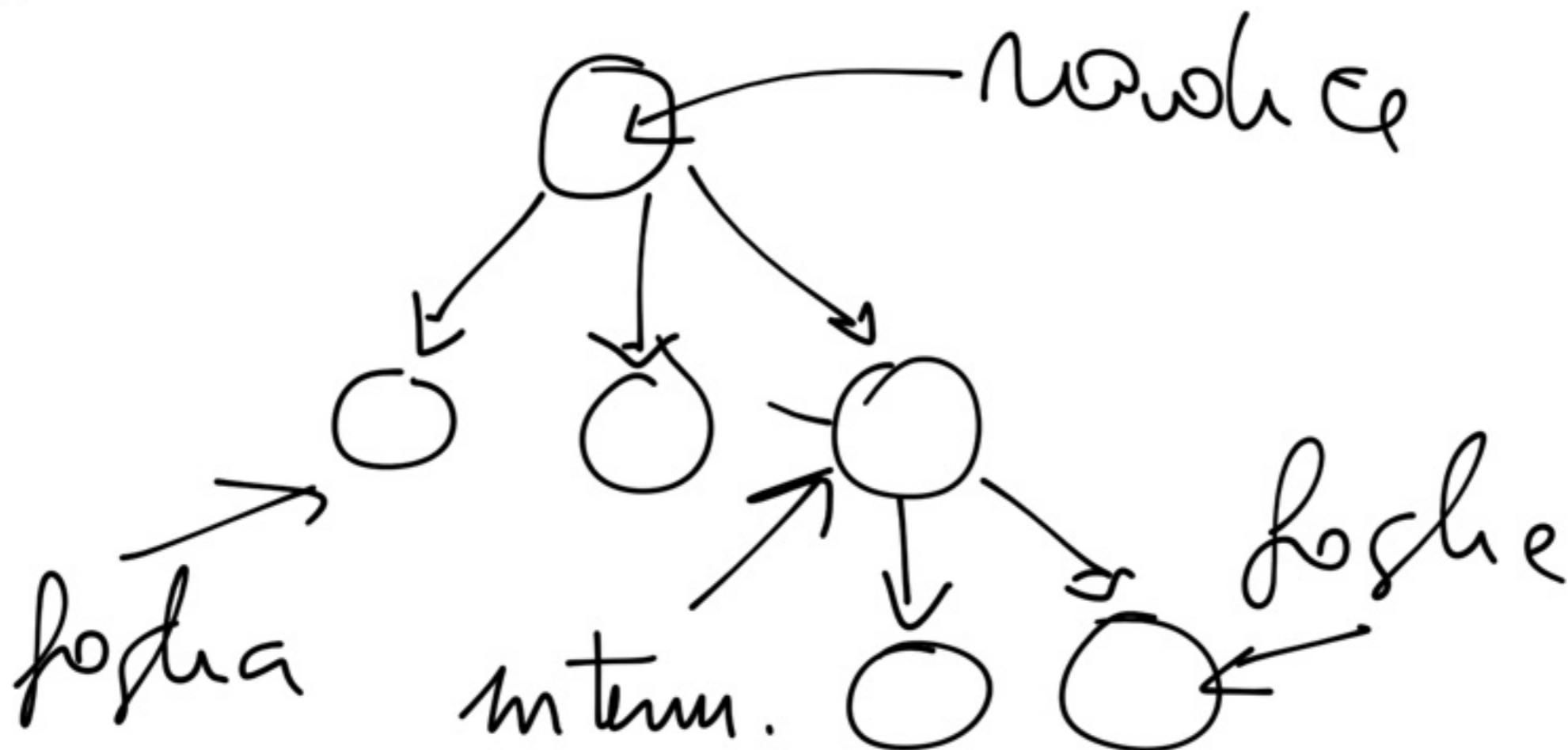
Alberi sono  
grafi

- non ci sono cicli
- in ogni modo  
entra al più  
un arco



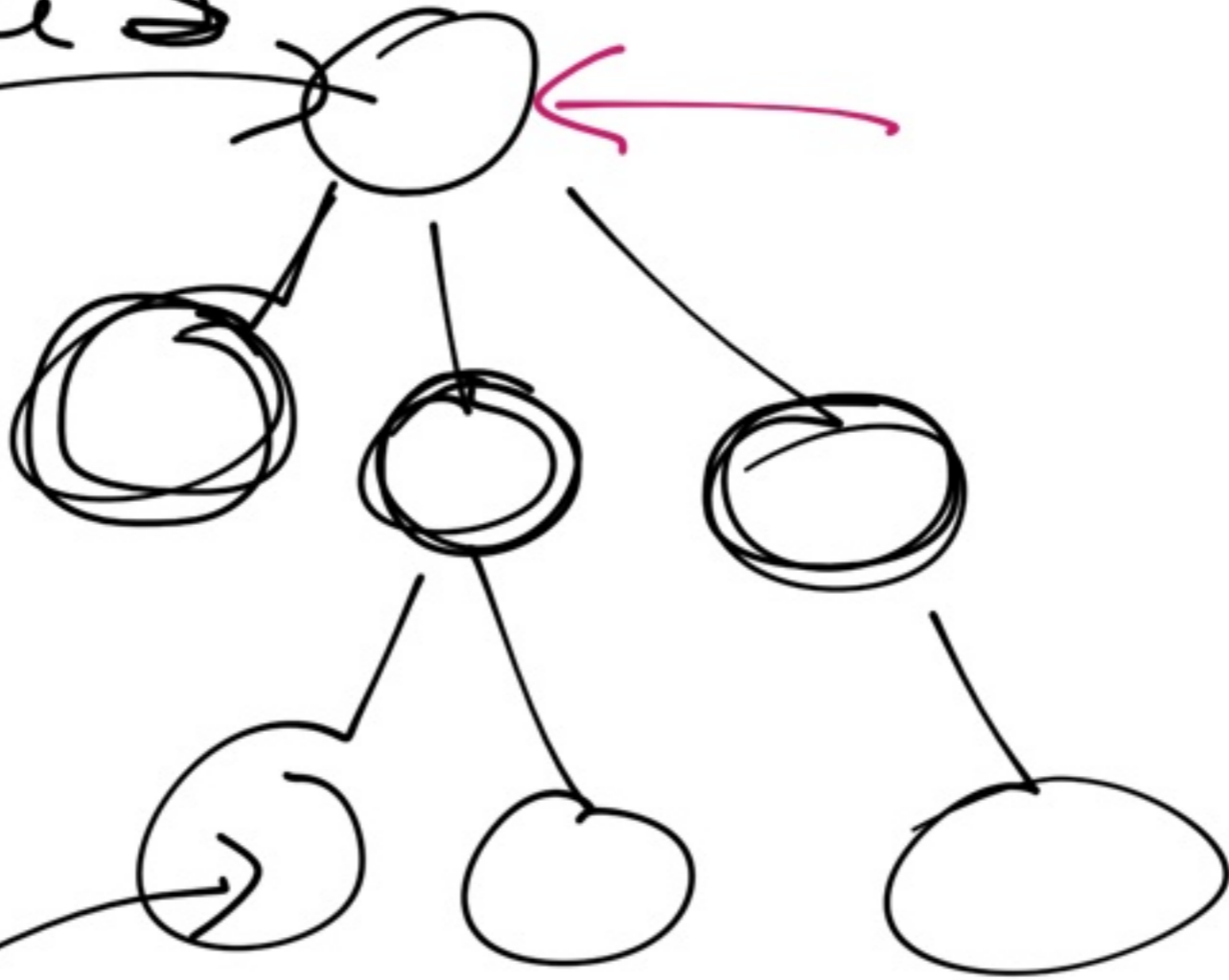


A noi interessano gli  
alberi in cui  
un solo nodo ha  
 $\emptyset$  anche entrambi.



Alberi di den Var. usfette  
a  $G = (N, V, S, P)$

radice  $S$



foglie

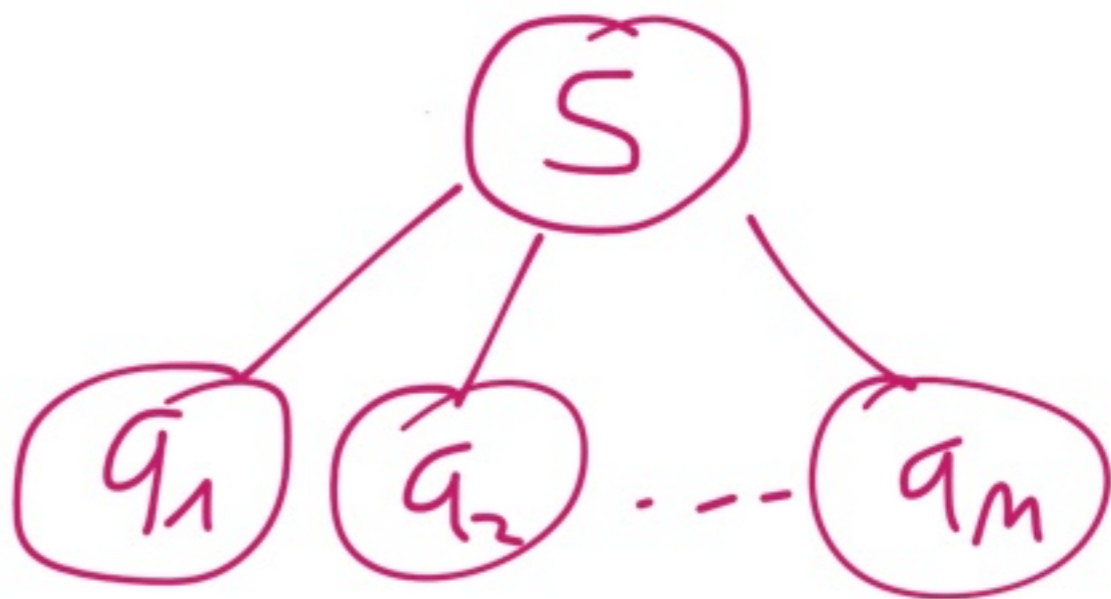
Simboli di  $N$

I figli di un nodo  
non foglia sono  
ottenuti attraverso

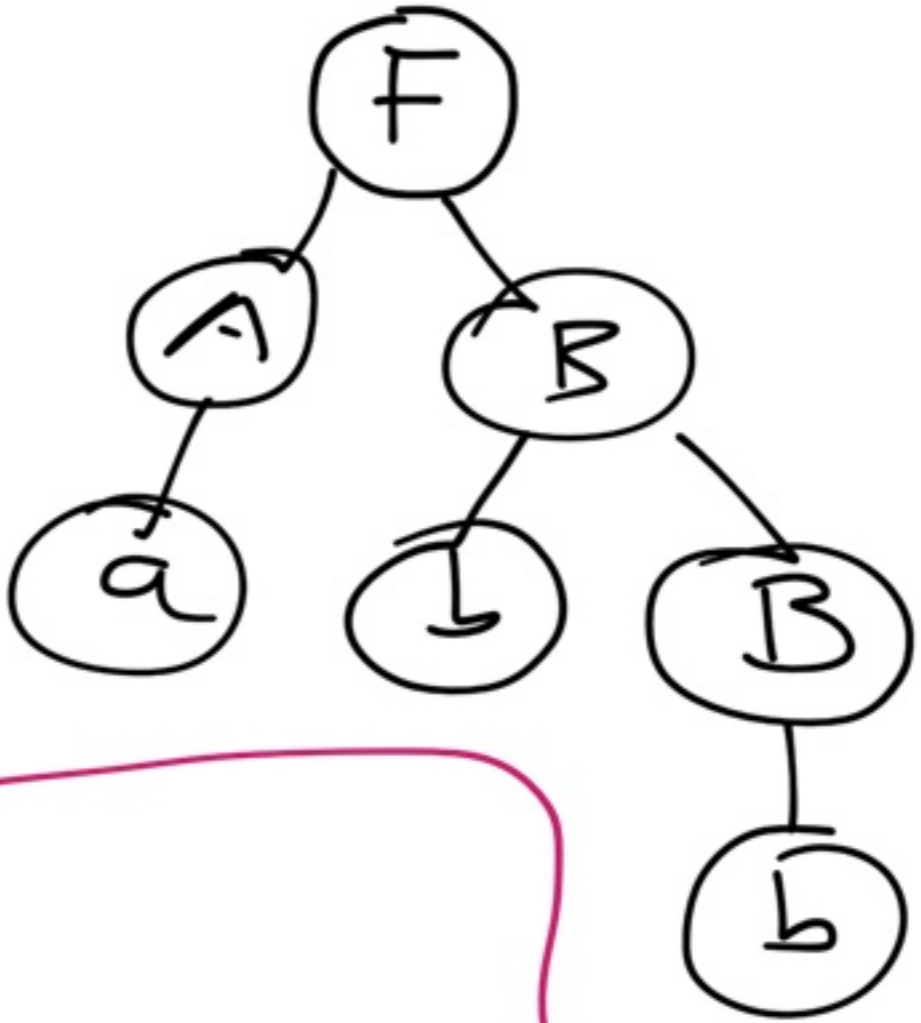
le produzioni

$$S \rightarrow a_1 a_2 a_3 \dots a_m$$

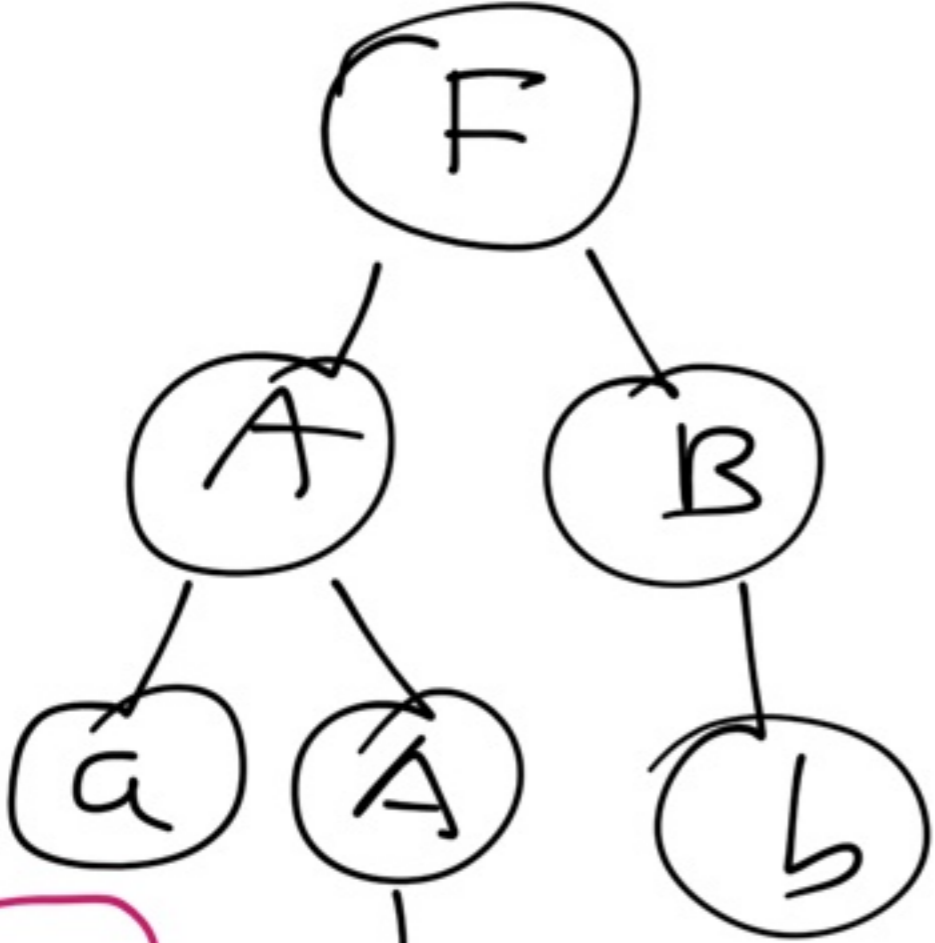
$$a_1, \dots, a_m \in \Sigma \cup V$$



$F \rightarrow AB$   
 $A \rightarrow a \mid aA$   
 $B \rightarrow b \mid bB$



abb



aab