

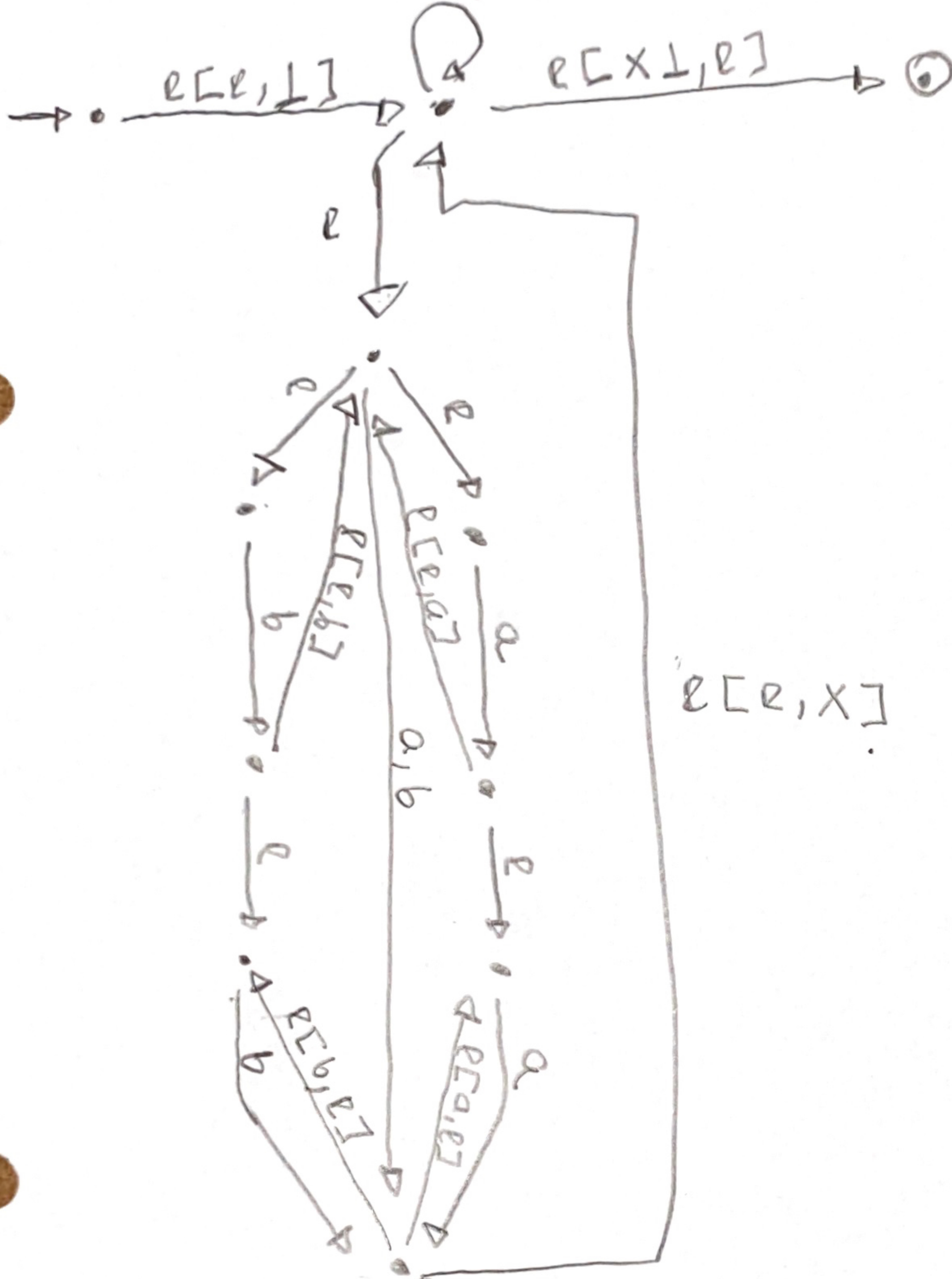
9-

ii)

Exp NPOL

$$) [x * x(, x]$$
$$) [x + x(, x)]$$

([e, f])

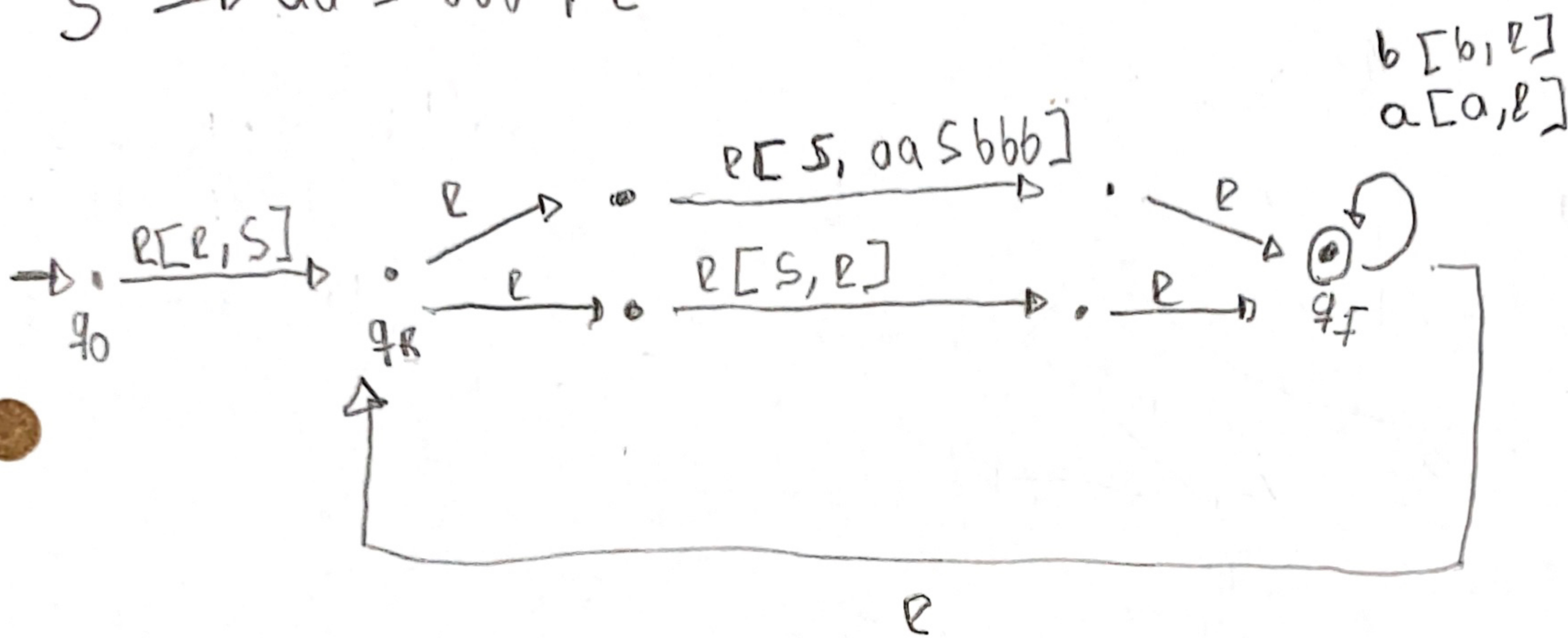
 $+ [L, +]$
$$*[2, *]$$


Prova 3 B - Autômatos

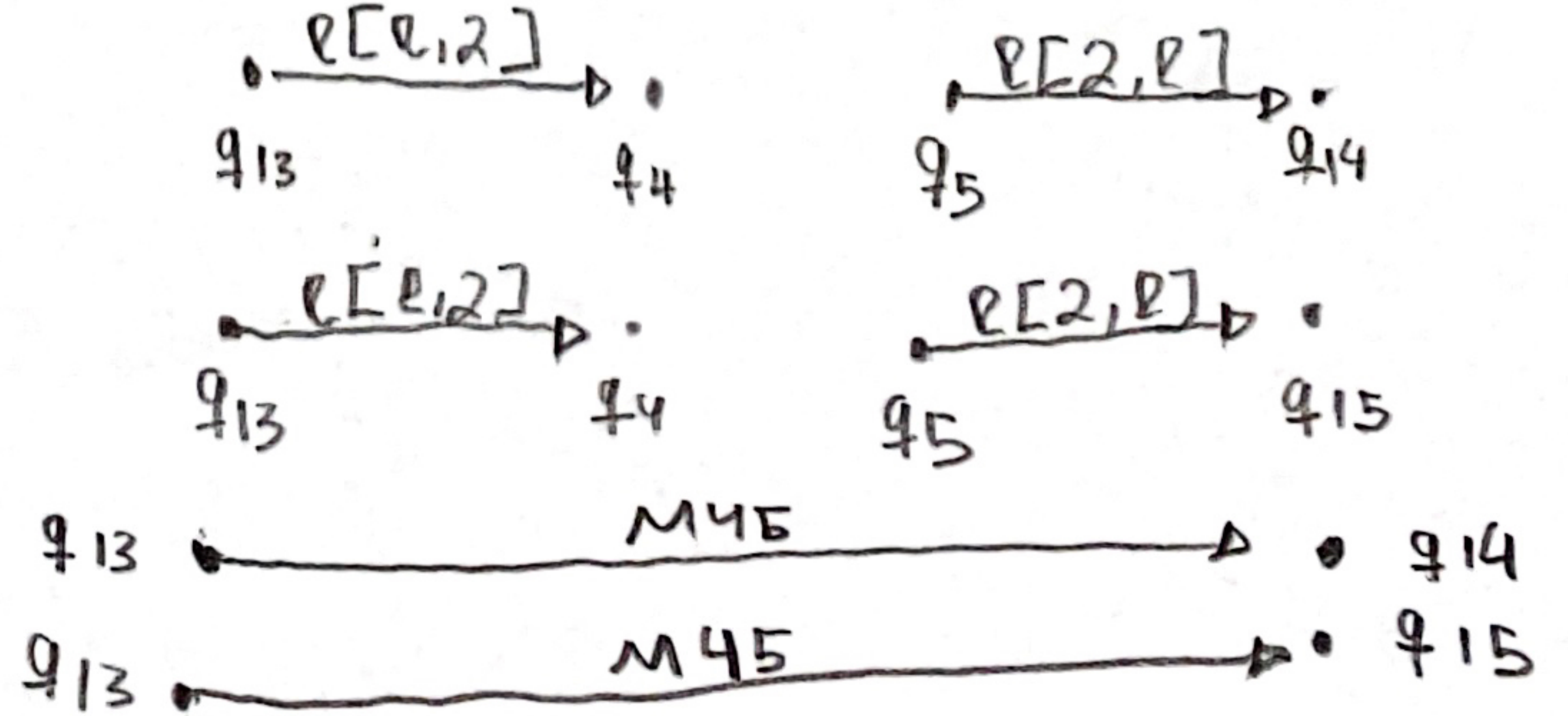
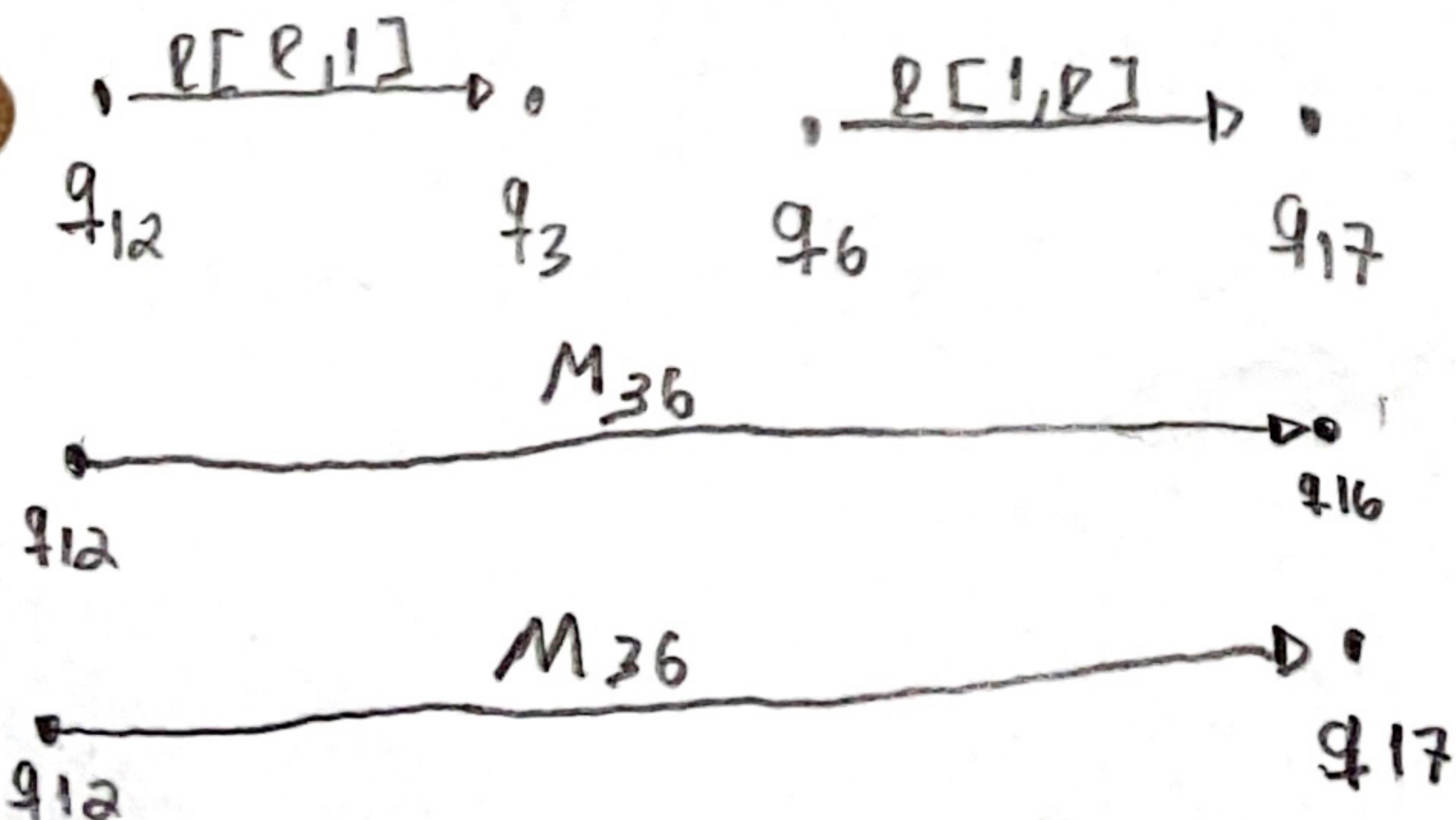
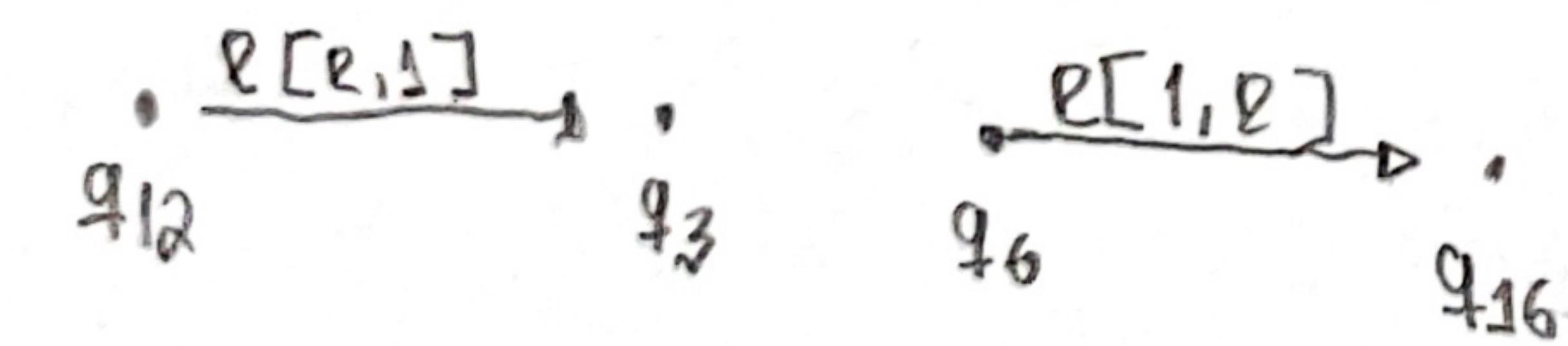
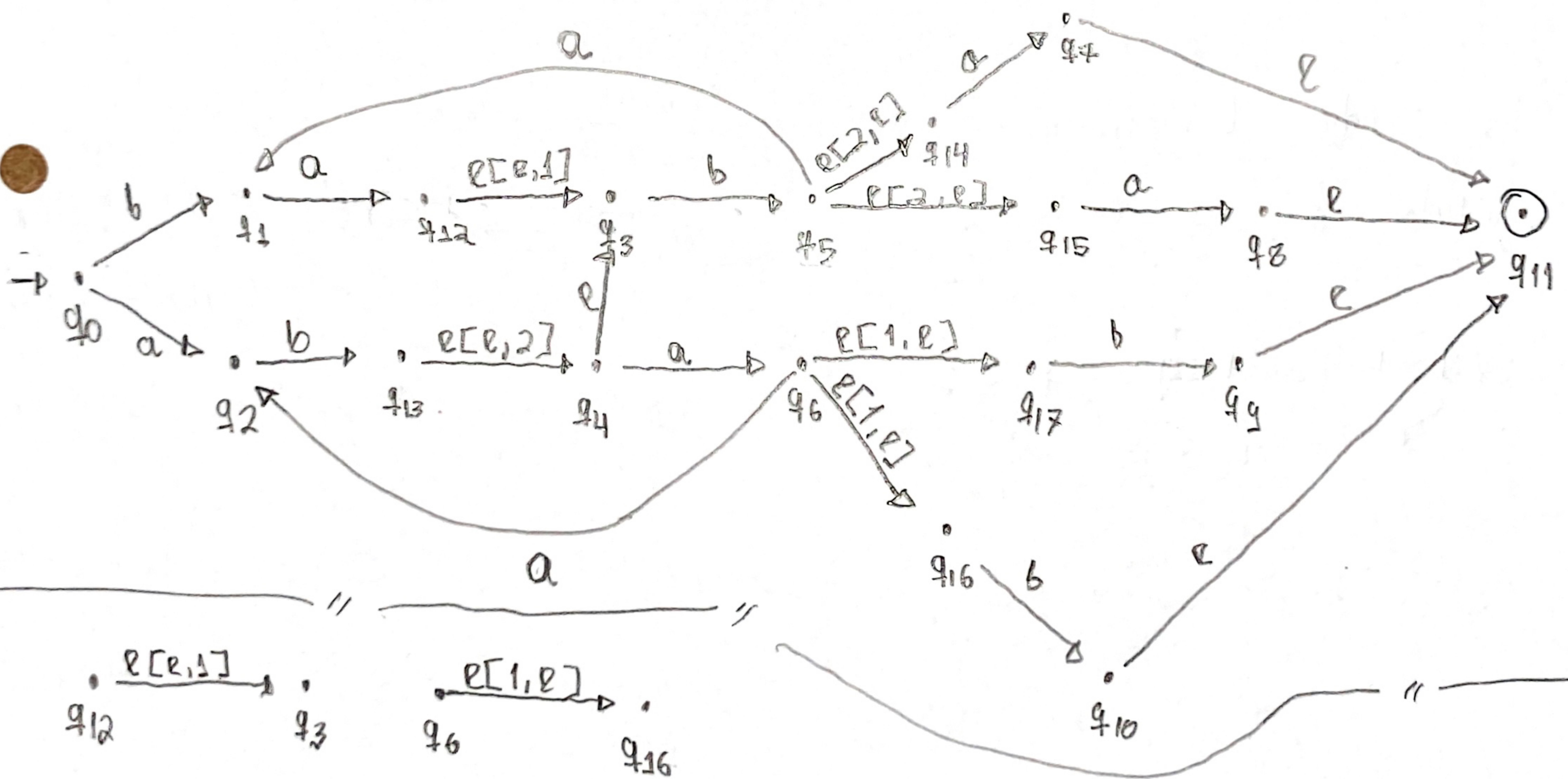
José Douglas Gondim Soares, 41853417

2- ii) $a^n b^{3n}$

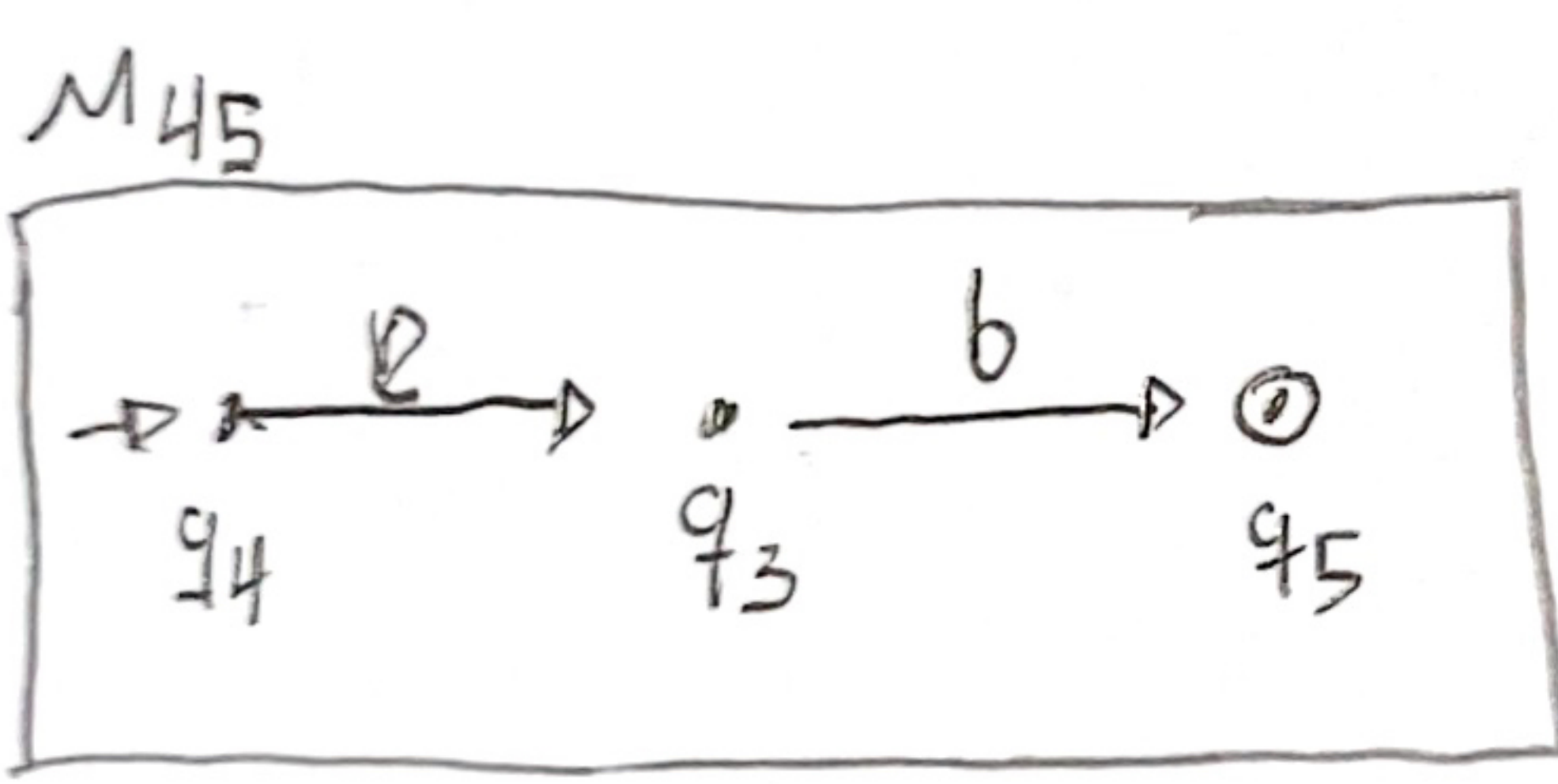
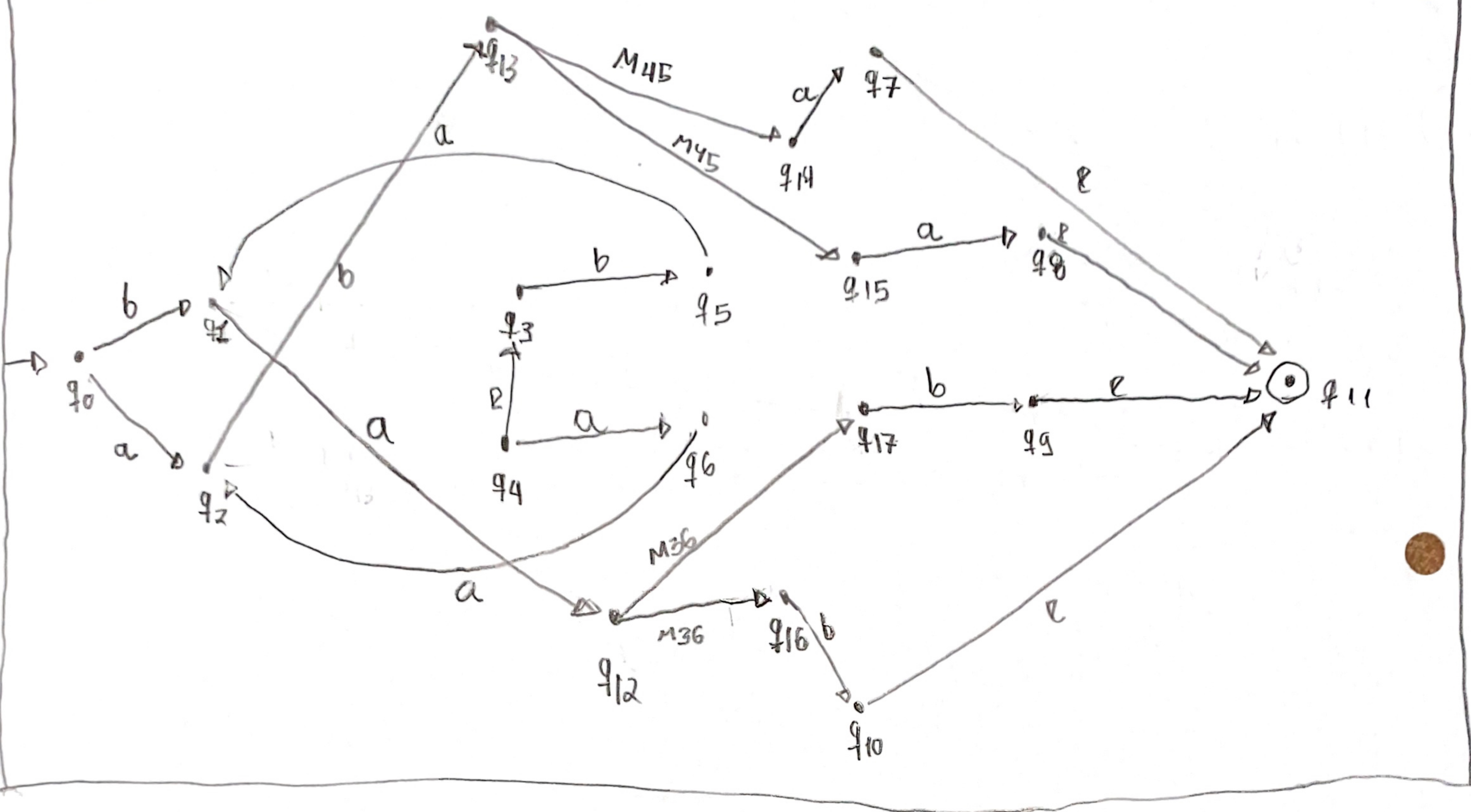
$S \rightarrow aaSbbb \mid \epsilon$



3-



M011



Obs: Não existe um caminho entre q3 e q6, logo, o Módulo 36 funciona como um estado de rejeição.

Então meche de mexer e enganar, mas da ponta de vista de módulo 011, os caminhos $q0 \rightarrow q1 \rightarrow q12 \rightarrow q17 \rightarrow q9 \rightarrow q11$ e $q4 \rightarrow q3 \rightarrow q5 \rightarrow q1$, parecem não fazer sentido, pois $\rightarrow q6 \rightarrow q7$

nunca se pode chegar neles a partir de q0. Então removeria.

u- a)

$$1 \quad S \rightarrow bbAbb \checkmark$$

$$2 \quad S \rightarrow aaBaa$$

$$3 \quad S \rightarrow \epsilon \checkmark$$

$$4 \quad A \rightarrow aBab \checkmark$$

$$5 \quad A \rightarrow S \checkmark$$

$$6 \quad B \rightarrow bAba$$

Derivando a regra 1: $S \rightarrow bbAbb$

$$7 \quad A \rightarrow \epsilon, \text{ por } 5 \text{ e } 3.$$

$$8 \quad S \rightarrow bbaBab, \text{ por } 1 \text{ e } 4$$

$$9 \quad B \rightarrow bba, \text{ por } 6 \text{ e } 7.$$

$$10 \quad S \rightarrow BBab, \text{ por } 9 \text{ e } 8$$

$$11 \quad \underline{S \rightarrow Bbbaab}, \text{ por } 10 \text{ e } 9$$

Derivando a regra 4: $A \rightarrow aBab$

$$12 \quad S \rightarrow bbb b, \text{ por } 1 \text{ e } 7$$

$$13 \quad A \rightarrow bb b b A b b b b, \text{ por } 5 \text{ e } 1$$

$$14 \quad A \rightarrow SA b b b b, \text{ por } 12 \text{ e } 13$$

$$15 \quad \underline{A \rightarrow A b b b b}, \text{ por } 3 \text{ e } 14$$

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