

Laboratorio # 1

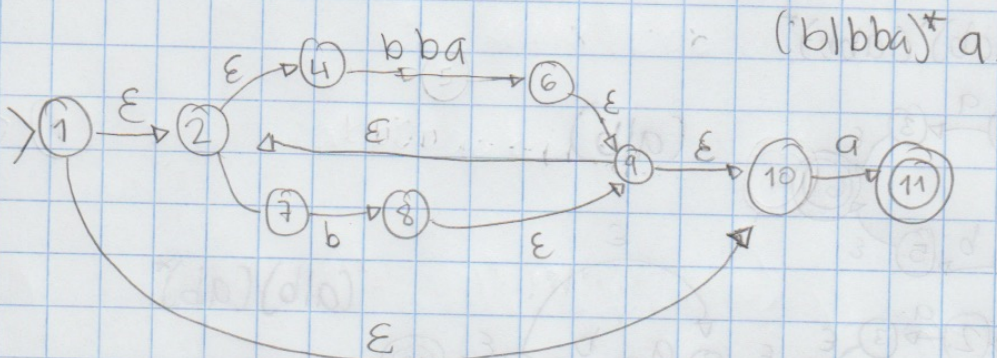
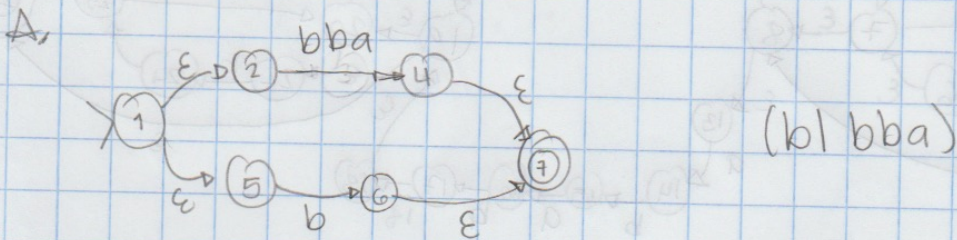
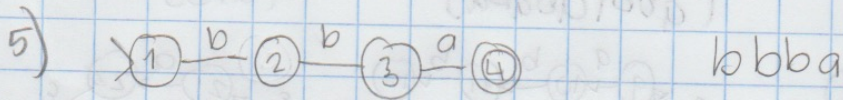
1. a^*b^* produce cadenas infinitas solo de a's o solo de b's. Ej: $aaaa|bbbb...$

$(a|b)^*$ produce combinaciones infinitas de a's o de b's.
Ej: $abbbbaabaa...$

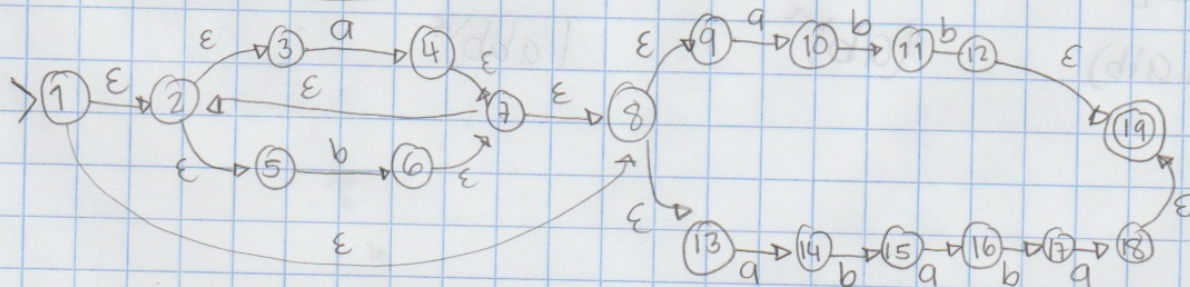
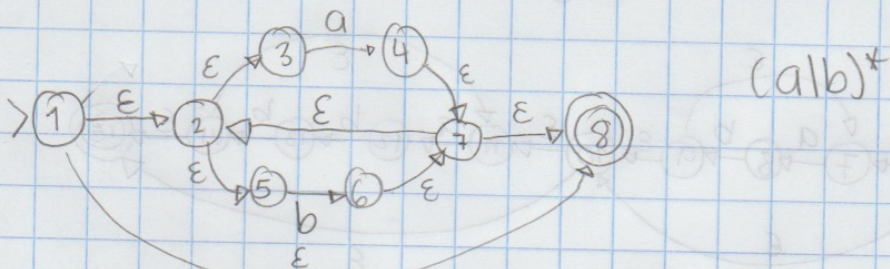
2. $(0|1)^* (11|000) ((1111)^* (011)^* 010)$

- 3.
- a. $aba \rightarrow$ si es aceptada
 - b. $abab \rightarrow$ No es aceptada
 - c. $aaabbb \rightarrow$ si es aceptada

$(b|bba)^* a$



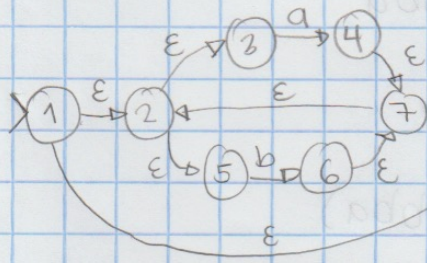
B. $(a|b)^* (abb|ababa) (a|b)^*$



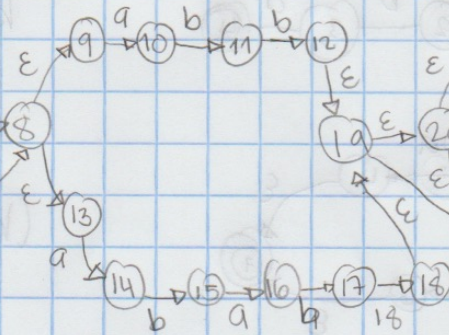
$(a|b)^* (abb|ababa)$

Sigue →

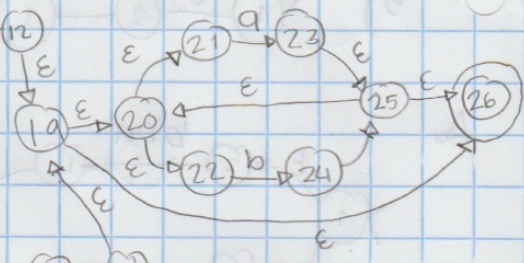
$(a|b)^4$



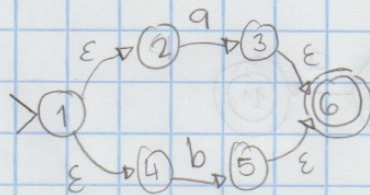
$(abb|ababa)$



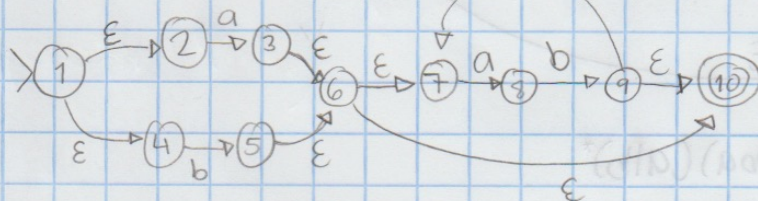
$(a|b)^+$



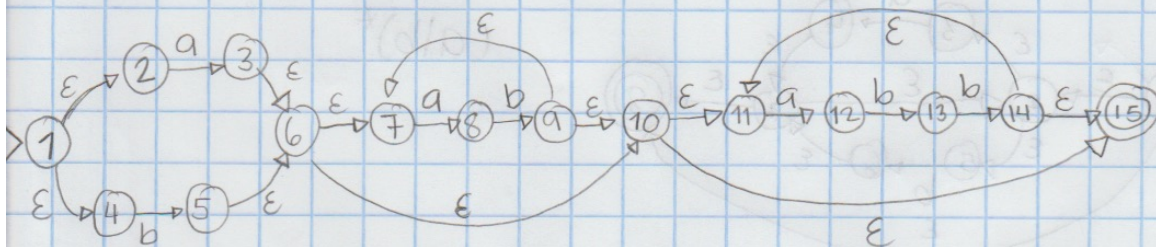
5C. $(a|b)(ab)^*(abb)^*$



$(a|b)$



$(a|b)(ab)^*$

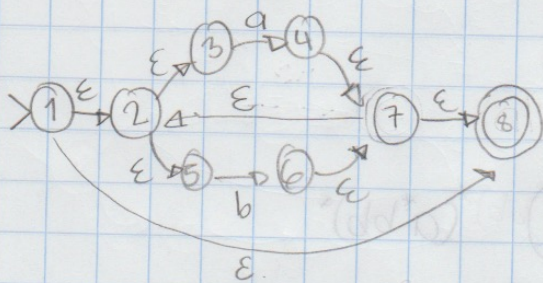


$(a|b)$

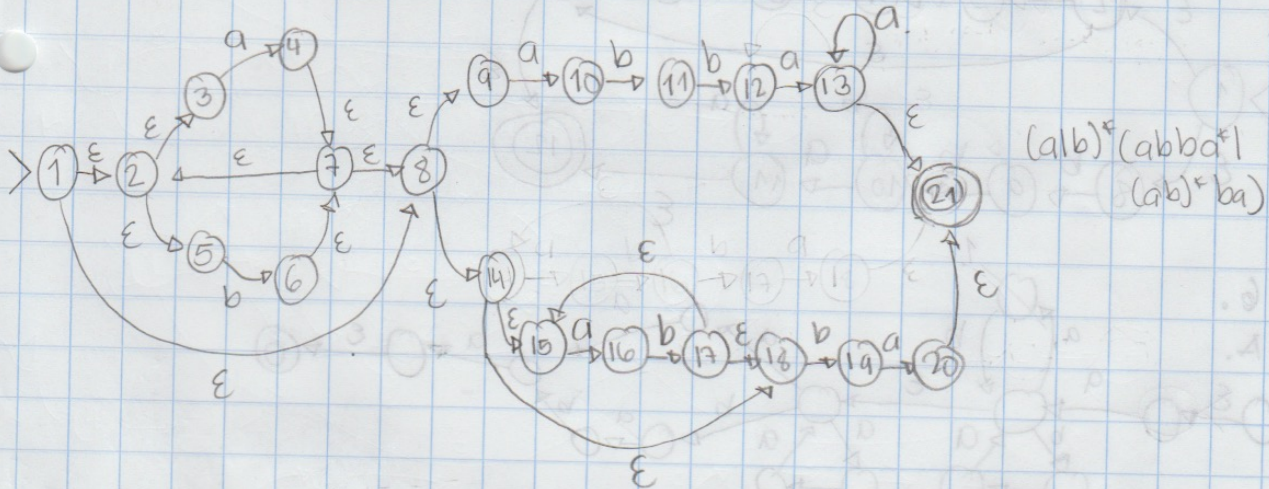
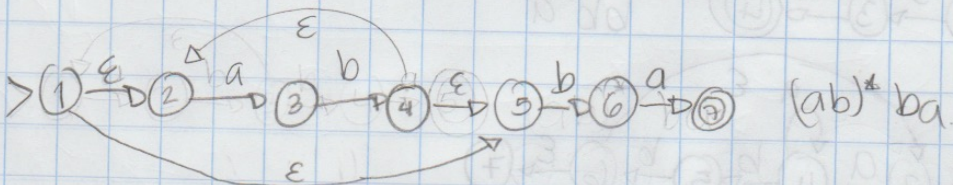
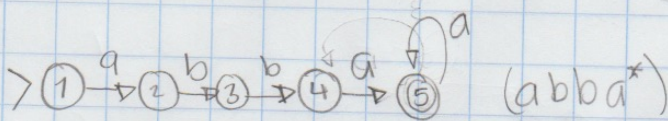
$(ab)^*$

$(abb)^*$

d. $(alb)^* (abba^* | (ab)^* ba)$



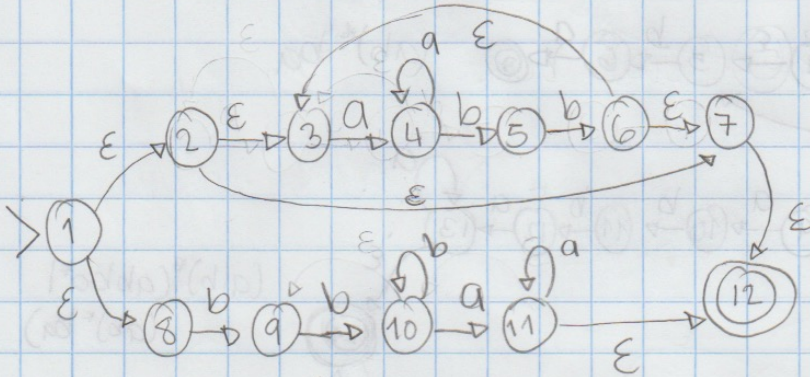
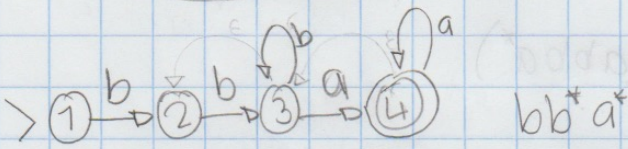
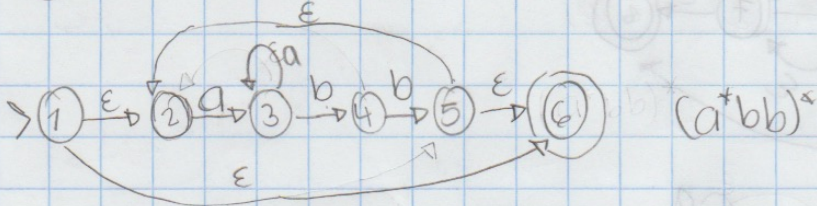
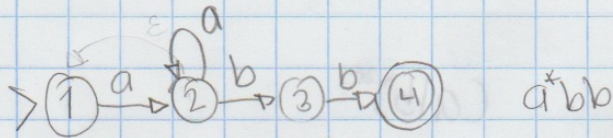
$(alb)^*$



$(alb)^* (abba^* | (ab)^* ba)$

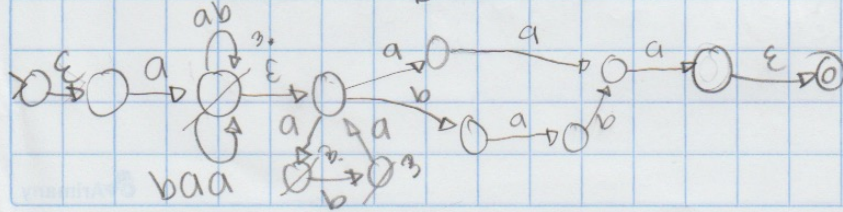
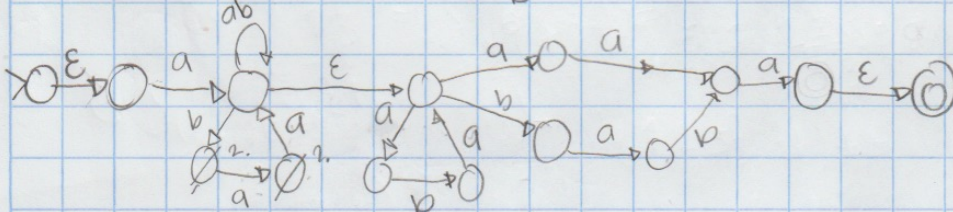
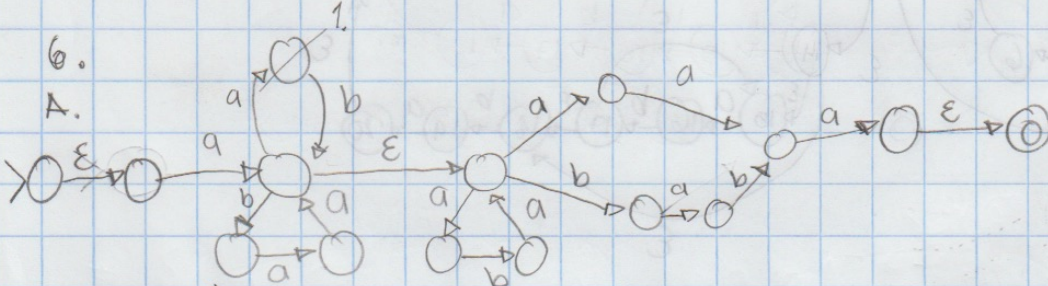
e. $(a^*bb)^+bb^*a^*$

$(a^*bb)^+bb^*a^*$



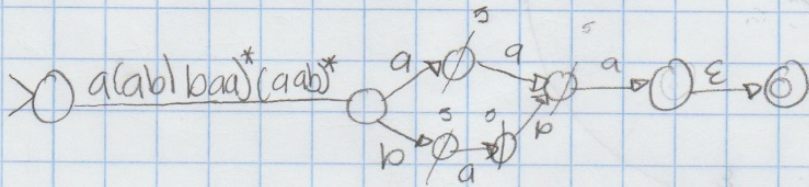
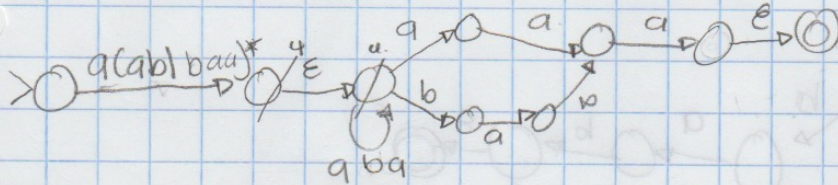
6.

A.

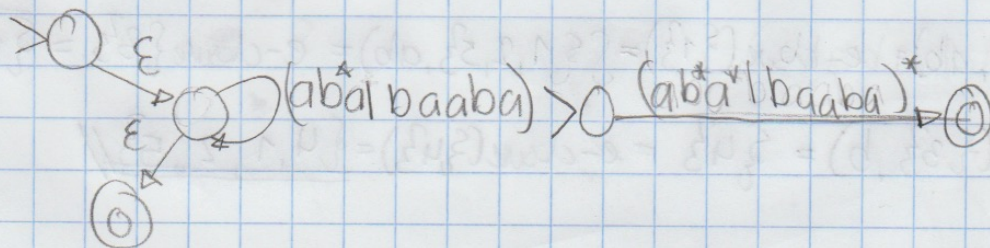
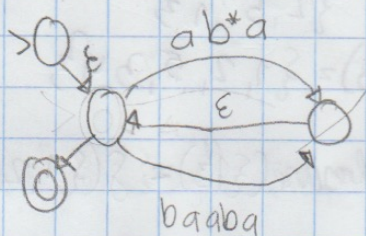
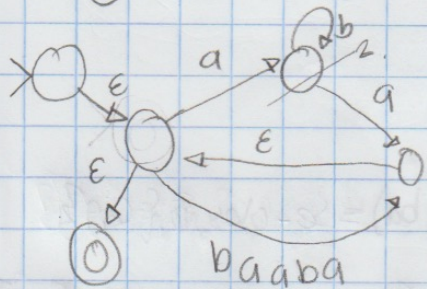
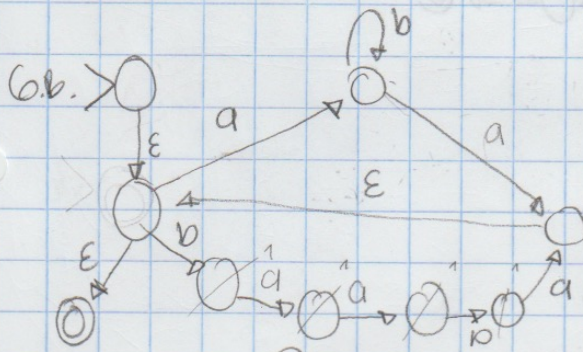


Signale
P

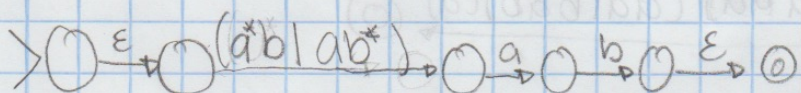
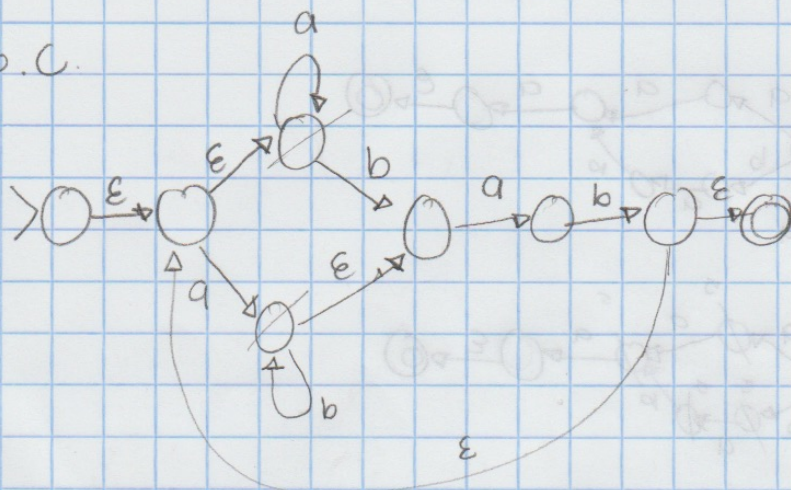
6A.
Vieru
9



$a(lab|baa)^*(abab)^*(a|bab)(a)$



6.c.



$$\rightarrow \circ [(a^*b | ab^*)(ab)]^+ \circ$$

7.

a. $E\text{-closure}(\{2,3\}) = \{5, 2, 3\}$

b. $E\text{-closure}(\{1\}) = \{2, 5, 1\}$

c. $E\text{-closure}(\{3,4\}) = \{1, 2, 5, 3, 4\}$

d. $\delta(1, ba) = E\text{-closure}(\{1\}) = \delta(\{1, 2, 5\}, ba) = E\text{-closure}(\{6, 7\})$

e. $= \{6, 7, 1, 2, 5\} = \delta(\{6, 7, 1, 2, 5\}, a) = \{5, 3\} = E\text{-closure}(\{5, 3\}) = \{5, 3\}$

f. $\delta(1, ab) = E\text{-closure}(\{1\}) = \delta(\{1, 2, 5\}, ab) = E\text{-closure}(\{3\}) = \{3\}$

$\delta(\{3\}, b) = \{4\} = E\text{-closure}(\{4\}) = \{4, 1, 2, 5\}$

f. 1,

$$f. \delta(1, ababaa) = e\text{-closure}(\{1, 3\}) = \delta(\{1, 2, 5\}) =$$

$$e\text{-closure}(\{3\}) = \{3\} = \delta(\{3\}, baba) = \{4\} = e\text{-closure}(\{4\})$$

$$= \{4, 1, 2, 5\} = \delta(\{4, 1, 2, 5\}, abaa) = \{4, 3\} = e\text{-closure}(\{4, 3\})$$

$$= \{4, 3, 1, 2, 5\} = \delta(\{4, 3, 1, 2, 5\}, ba) = \{4, 6, 7\}$$

$$= e\text{-closure}(\{4, 6, 7\}) = \{4, 1, 2, 5, 6, 7\} = \delta(\{4, 1, 2, 5, 6, 7\}, a) = \{4, 3, 5\} =$$

$$= e\text{-closure}(\{4, 3, 5\}) = \underline{\underline{\{4, 3, 1, 2, 5\}}}$$