

Teoría de la computación

A $\Sigma = \{a, +, c\}$ (all) c

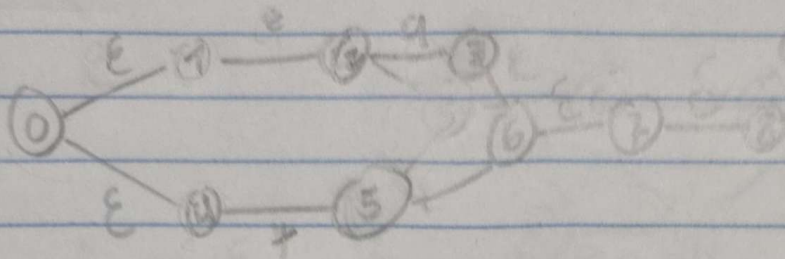
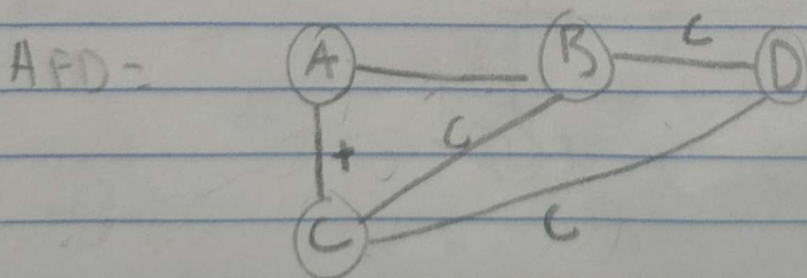
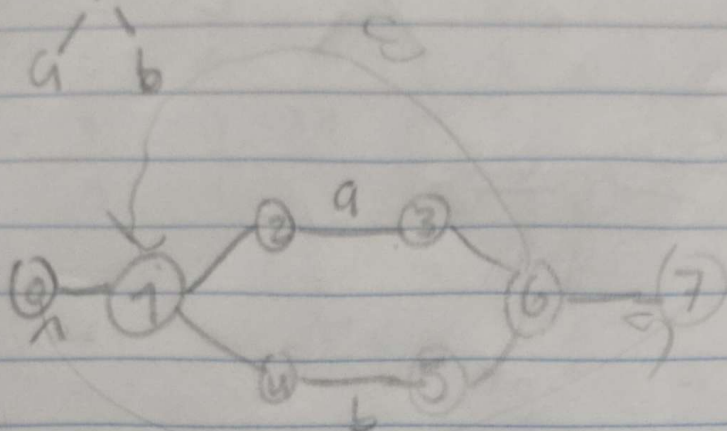


Tabla	a	+	c	c^*
0	-	-	-	$\{0, 1, 2, 4\}$
1	-	-	-	$\{1, 2, 4\}$
2	3	-	-	$\{2, 3\}$
3	-	-	-	$\{3, 6, 7\}$
4	-	5	-	$\{4\}$
5	-	-	-	$\{5, 6, 7\}$
6	-	-	-	$\{6, 7\}$
7	-	-	8	$\{7\}$
8	-	-	-	$\{8\}$

AFD	NFA	a	+	c
A	$\{0, 1, 2, 4\}$	B	c	-
B	$\{3, 6, 7\}$	-	-	D
C	$\{5, 6, 7\}$	-	-	D
D	$\{8\}$	-	-	-

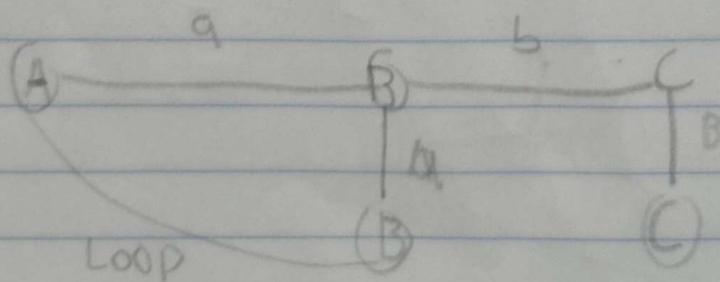


B) * Postfix a b | *

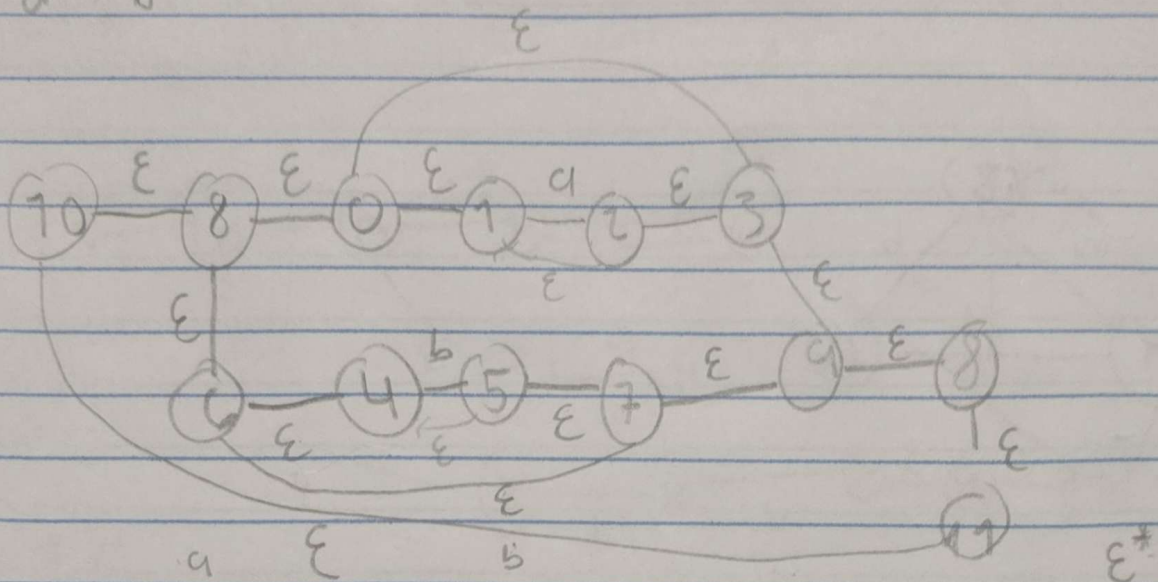
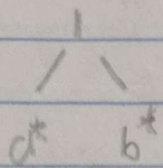


AFN	a	b	ϵ
0	-	-	$\{0, 1, 2, 4, 7\}$
1	-	-	$\{1, 2, 4\}$
2	3	-	$\{2\}$
3	-	-	$\{3, 4, 1, 2, 4, 7\}$
4	-	5	$\{4\}$
5	-	-	$\{5, 6, 1, 2, 4, 7\}$
6	-	-	$\{6, 1, 4, 4, 7\}$
7	-	-	

Iden	Conjunto	a	b
A	$\{0, 1, 2, 4, 7\}$	B	C
B	$\{1, 2, 3, 4, 6, 7\}$	B	C
C	$\{1, 2, 4, 5, 6, 7\}$	B	C

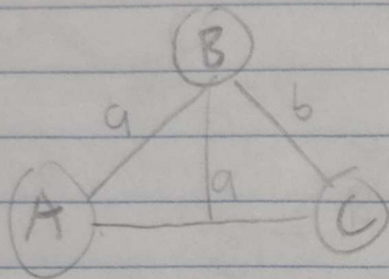


c) $a^* b^* | a^*$



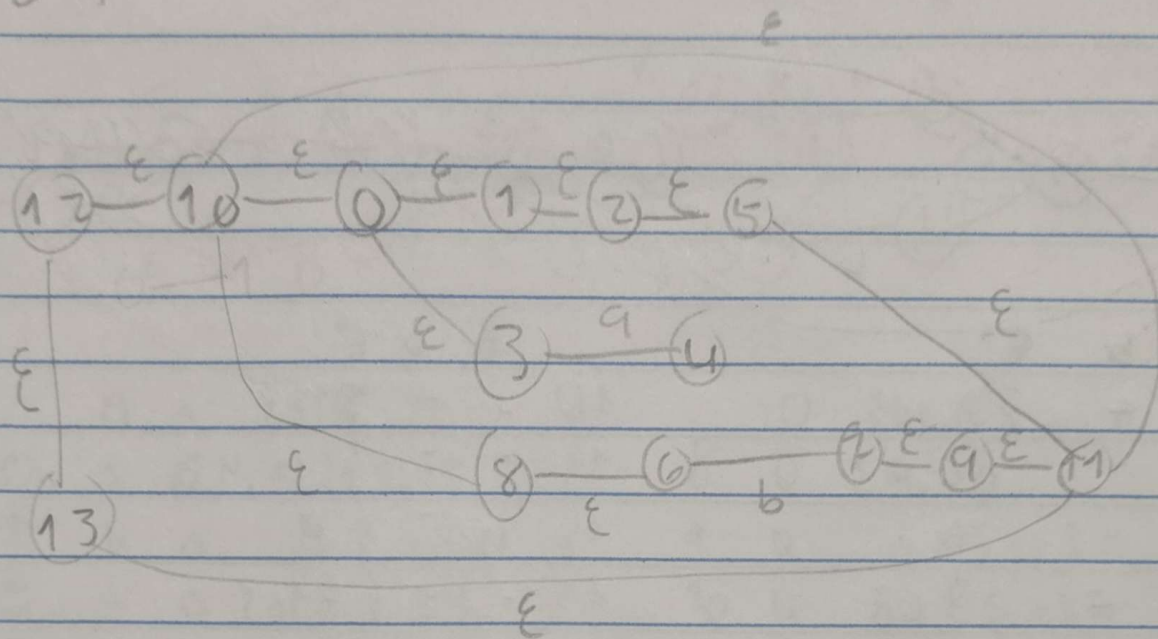
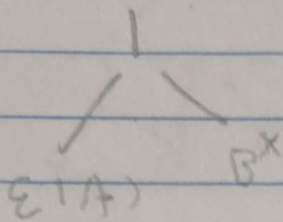
0	-	-	$\Sigma \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11\}$
1	2	-	$\Sigma \{1, 2\}$
2	-	-	$\Sigma \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11\}$
3	-	-	$\Sigma \{0, 1, 3, 4, 5, 6, 7, 8, 9, 10, 11\}$
4	-	5	$\Sigma \{4\}$
5	-	-	$\Sigma \{4, 5, 6, 7, 8, 9, 10, 11, 0, 1, 2, 3\}$
6	-	-	$\Sigma \{0, 1, 3, 4, 6, 7, 8, 9, 10, 11\}$
7	-	-	$\Sigma \{0, 1, 3, 4, 6, 7, 8, 9, 10, 11\}$
8	-	-	$\Sigma \{0, 1, 3, 4, 6, 7, 8, 9, 10, 11\}$
9	-	-	$\Sigma \{0, 1, 3, 4, 6, 7, 8, 9, 10, 11\}$
10	-	-	$\Sigma \{0, 1, 3, 4, 6, 7, 8, 9, 10, 11\}$
11	-	-	$\Sigma \{1, 1\}$

		a	b
A	$\{0, 1, 3, 4, 6, 7, 8, 9, 10, 11\}$	B	C
B	$\{0, 1, 2, 3, 4, 6, 7, 8, 9, 11\}$	B	C
C	$\{0, 1, 3, 4, 5, 6, 7, 8, 9, 11\}$	B	C



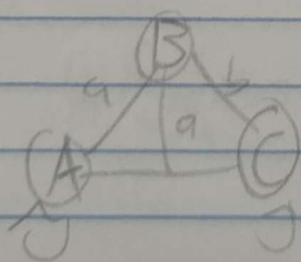
D

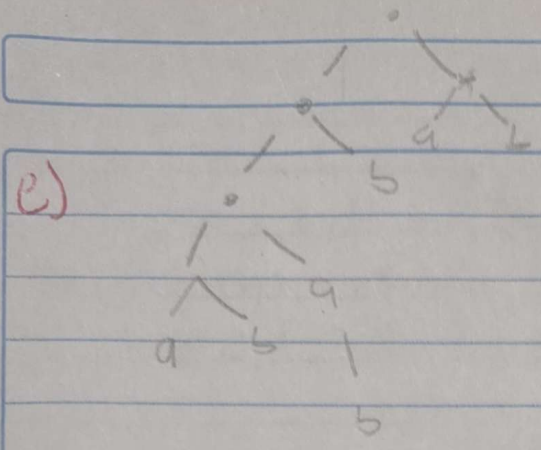
1) * postfix ϵ a | b*



	a	b	ϵ^*
0	$\{0, 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13\}$
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	$\{0, 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 13\}$
11	
12	
13	$\{0, 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13\}$

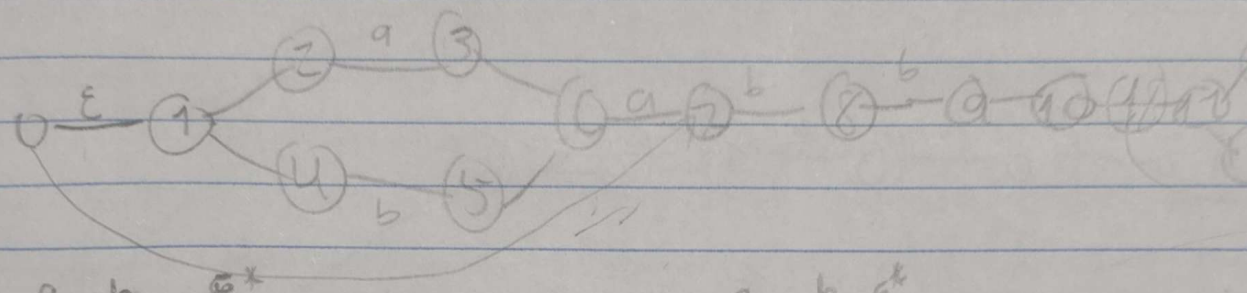
AFD





c)

Postfix $a b (a \cdot b \cdot b \cdot a \cdot b)$



	a	b	ϵ^*
0	-	5	$\{1, 11\}$
1	-	-	$\{2, 4\}$
2	3	-	\emptyset
3	-	-	$\{6\}$
4	-	5	\emptyset
5	-	-	$\{6\}$
6	-	-	$\{1, 7\}$
7	8	-	\emptyset
8	-	9	\emptyset
9	-	10	\emptyset

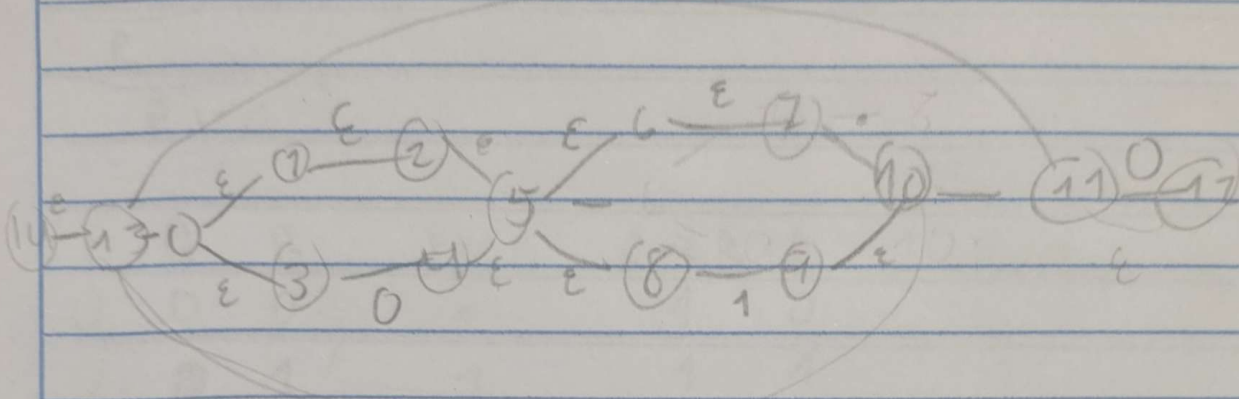
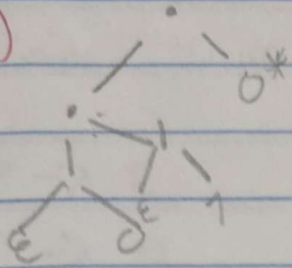
	a	b	ϵ^*
10	-	-	$\{17\}$
11	-	-	$\{12, 4\}$
12	13	-	\emptyset
13	-	-	$\{16\}$
14	-	-	\emptyset
15	-	15	$\{16\}$
16	-	-	$\{11, 18\}$
17	-	-	$\{11, 18\}$
18	-	-	\emptyset

DFA	a	b	Acceptacion	AFD
A	B	C	\	
B	B	D	\	
C	B	C	\	
D	B	E	\	
E	E	E	✓	

9, 2, 5 3, 4, 10 1, 8, 7.

F)

$\epsilon 0 1 \epsilon 1 1 0^*$



	0	1	ϵ^*		0	1	ϵ^*
0	0	0	$\{1, 3\}$	8	0	9	0
1	0	0	$\{2, 3\}$	9	0	0	$\{10\}$
2	0	0	$\{5, 3\}$	10	0	0	$\{1, 3\}$
3	4	0	0	11	0	0	0
4	0	0	$\{5\}$	12	12	0	$\{1, 11, 4\}$
5	0	0	$\{6, 8\}$	13	0	0	$\{1, 11, 4\}$
6	0	0	$\{7\}$	14	0	0	0
7	0	0	$\{10\}$				

P F a	0	1
A	B	C
B	B	C
C	B	-

