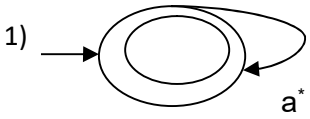
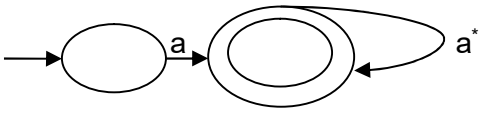
Exercice 1:

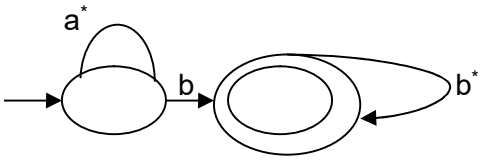
1)



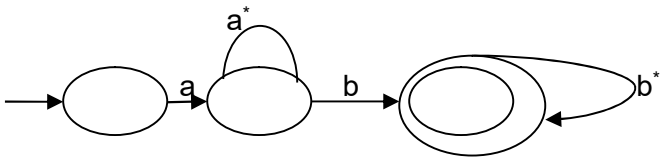
2)



3)

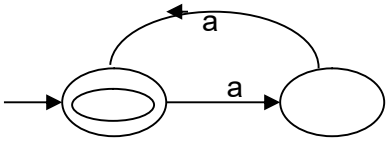


4)



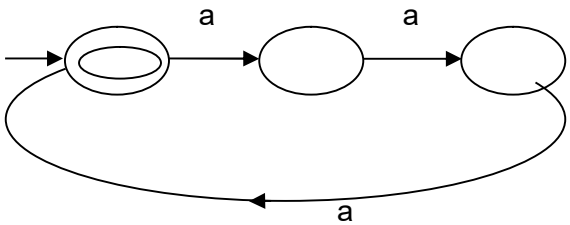
Exercice 2

1)

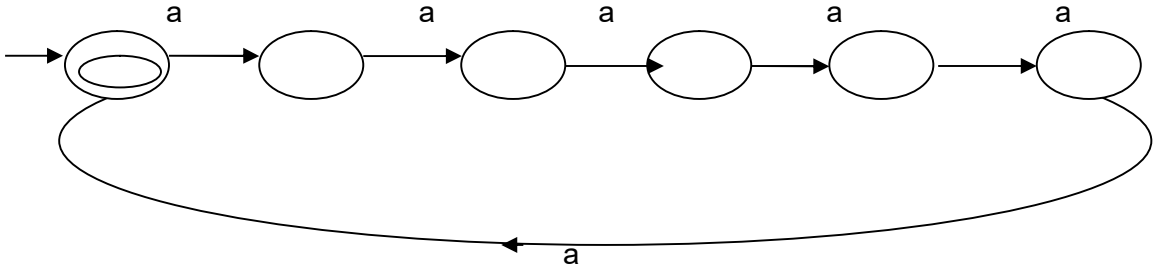


2) $(aaa)^*$

3)



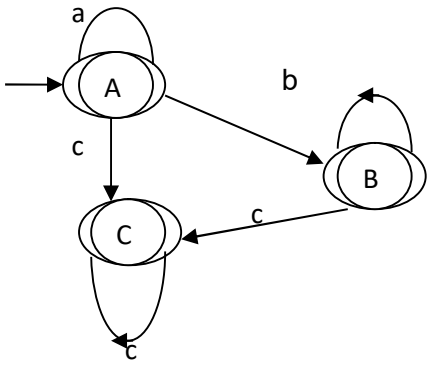
4)



Exercice 3:

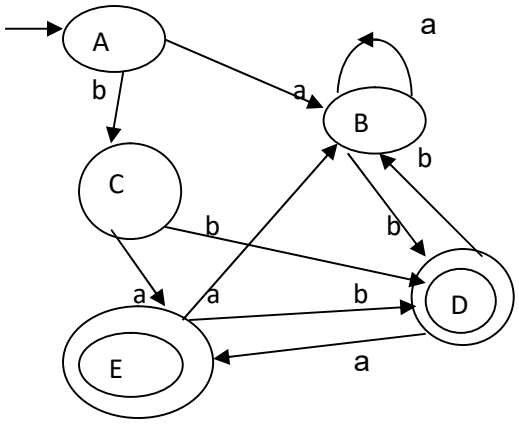
1) ε-f(p)=(p,q,r)

Etat	a	b	c
{P,q,r} /A	A	{q,r} /B	{r}/C
B	-	B	C
C	-	-	C



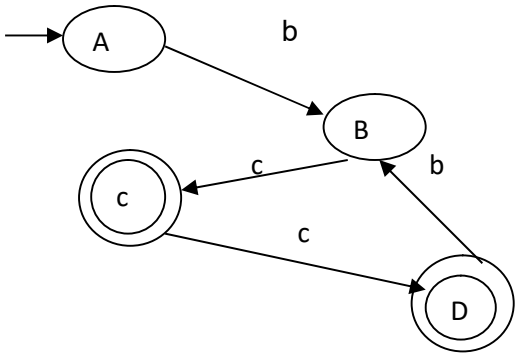
2) ε-f(0)=(1,2,3)

Etat	a	b
{1,2,3}/A	{4,2}/B	{1 ,3}/C
B	B	{3,1,5} /D
C	{5,4,2}/E	D
D	E	C
E	B	D



5) ε-f(1)=(1)

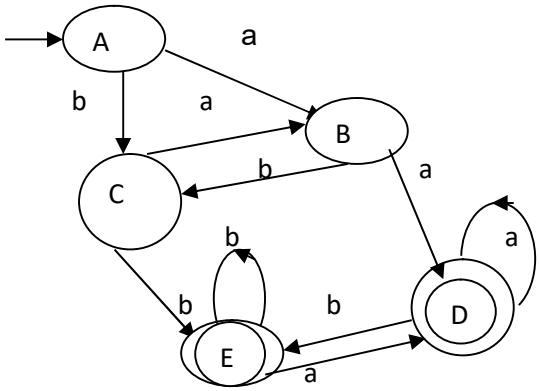
Etat	a	b	c
{1}/A	{2,3,5,6}/B	-	-
B		{4, 5,6,8,9} /C	-
C	-	-	{7,2,3,8,9}/D
D	-	B	-



Exercice 4 :

1) (a|b)*(aa|bb) (a|b)*
2)

Etat	a	b
{0}/A	{0,1}/B	{0,2}/C
B	{0,1,3}/D	C
C	B	{0,2,3}/E
D	D	E
E	D	E



3) P0 : {A,B,C} /1, {E,D}/2

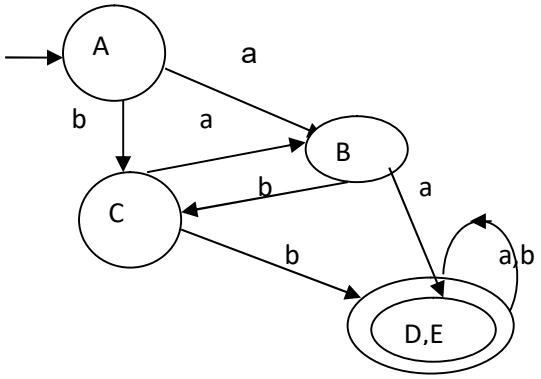
	a	b
A	1	1
B	2	1
C	1	2

	a	b
D	2	2
E	2	2

P1 : {A}/1, {B}/2, {C}/3, {D,E}/4

	a	b
D	4	4
E	4	4

P2 : {A}/1, {B}/2, {C}/3, {D,E}/4→ p1=p2 on s'arrête



4)

AFD reconnaissant le lge complémentaire:

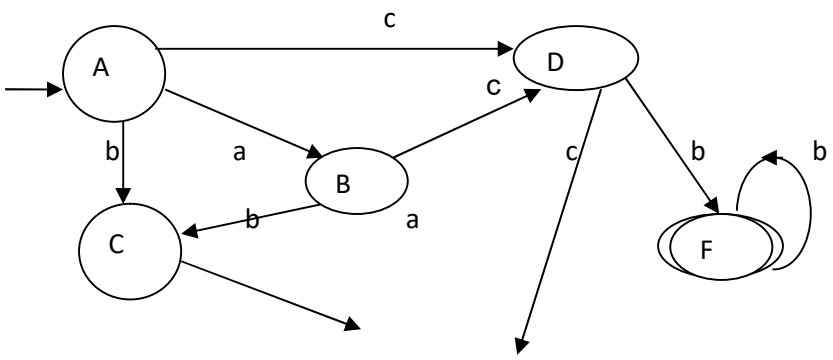
- Doit être déterministe
- doit être complet
- état initial reste le même
- état final ➔ (normal) ordinaire
- état (normal) ordinaire + état puits ➔ final

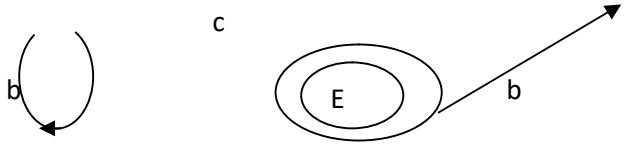
Exercise 5:

1)

ε-f(1)=(1,2)

	a	b	c
{1,2}/A	{2}/B	{2,4}/C	{3}/D
B	-	C	D
C	-	C	{3,5,6}/E
D	-	{5,6}/F	E
E	-	F	-
F	-	F	-





2)

P0: {A,B,C,D}/1, {E,F}/2

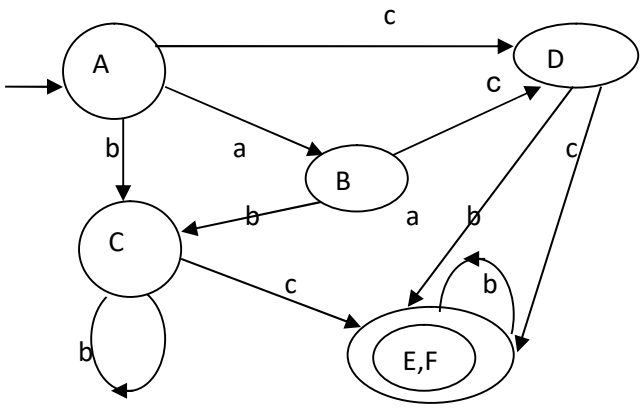
	a	b	c
A	1	1	1
B	-	1	1
C	-	1	2
D	-	2	2

	a	b	c
E	-	2	-
F	-	2	-

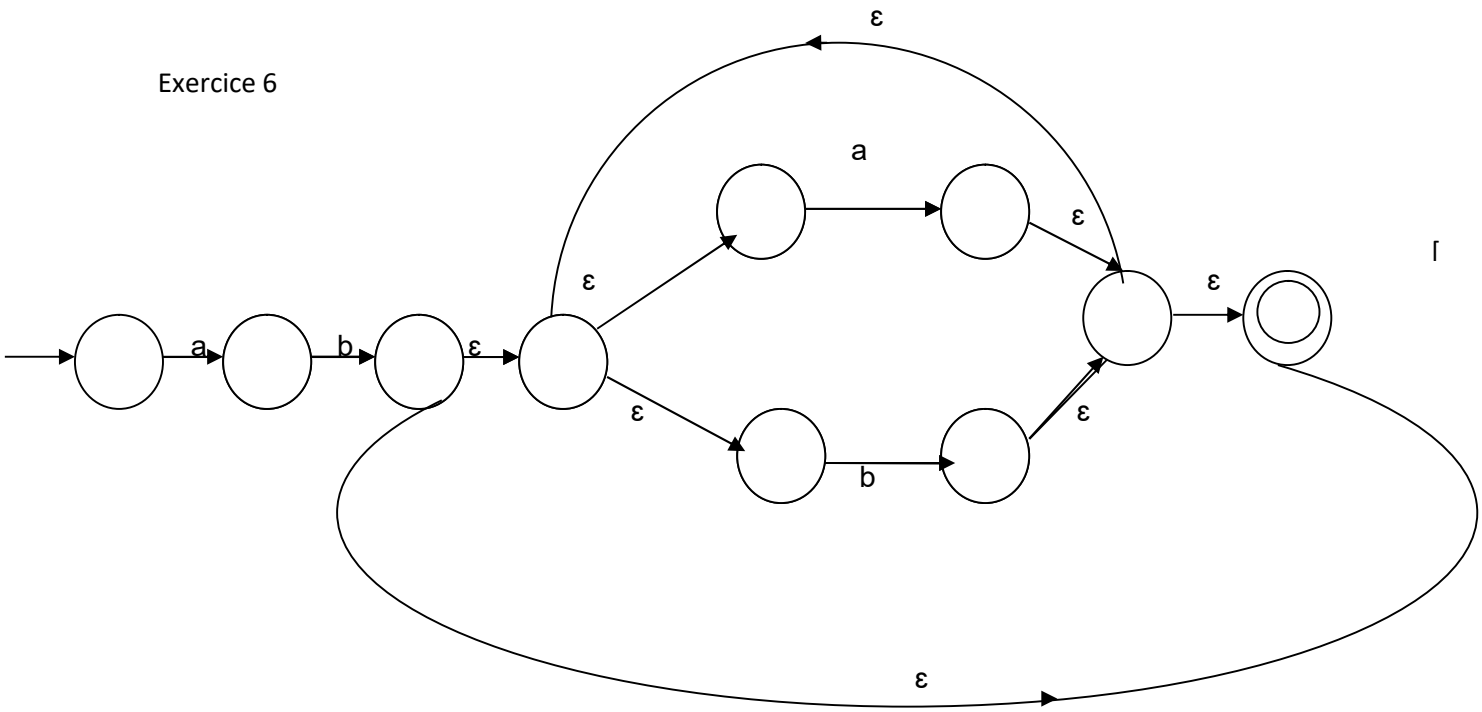
P1: {A}/1, {B}/2,{C}/3,{D}/4,{E,F}/5

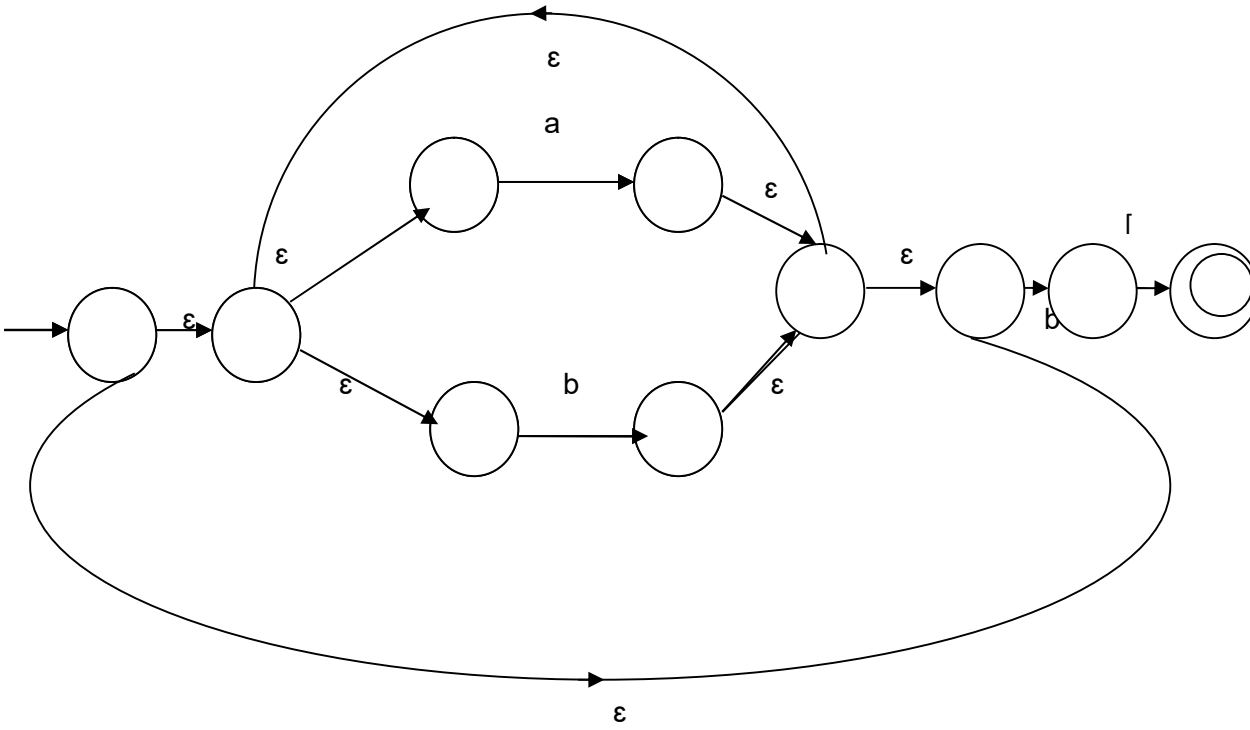
	a	b	c
E	-	5	-
F	-	5	-

P1: {A}/1, {B}/2,{C}/3,{D}/4,{E,F}/5→ p1=p2 on s'arrête



Exercice 6





Exercice 9:

1) la correction se trouve dans le cours

2)

P0: {1,2,3,4,6}/A; {0,5}/B

	a	B
1	A	B
2	A	B
3	A	A
4	A	B
6	B	B

	a	b
0	B	B
5	A	B

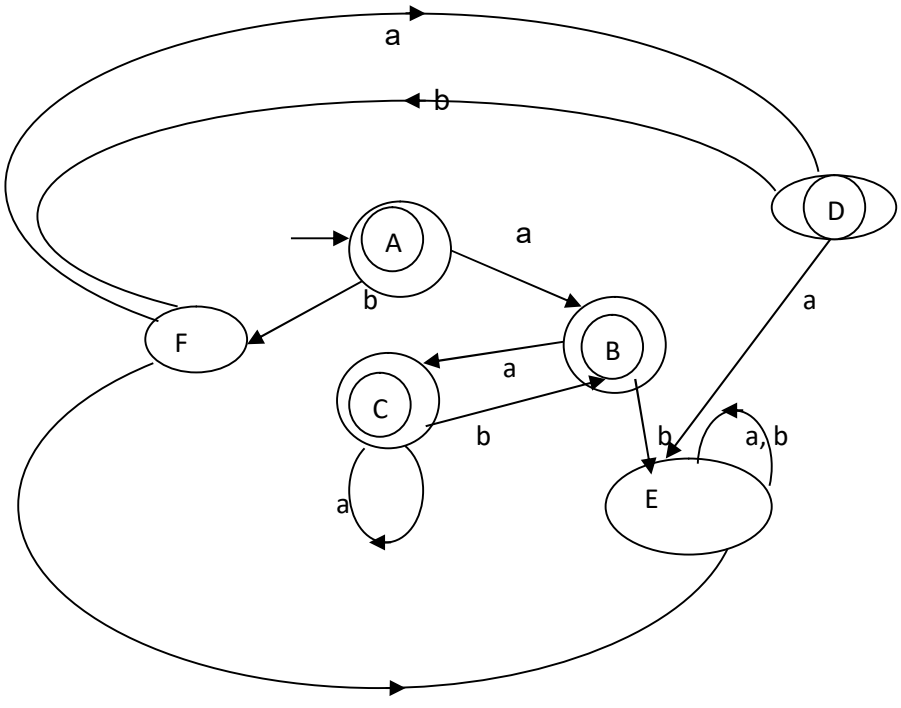
P1: {1,2,4}/A; {3}/B;{6}/C;{0}/D;{5}/E

	a	b
1	A	E
2	B	D
4	B	D

P2: : {1}/A;{2,4}/B; {3}/C;{6}/D;{0}/E;{5}/F

	a	b
2	C	E
4	C	E

P2=p1→ on s'arrete



b