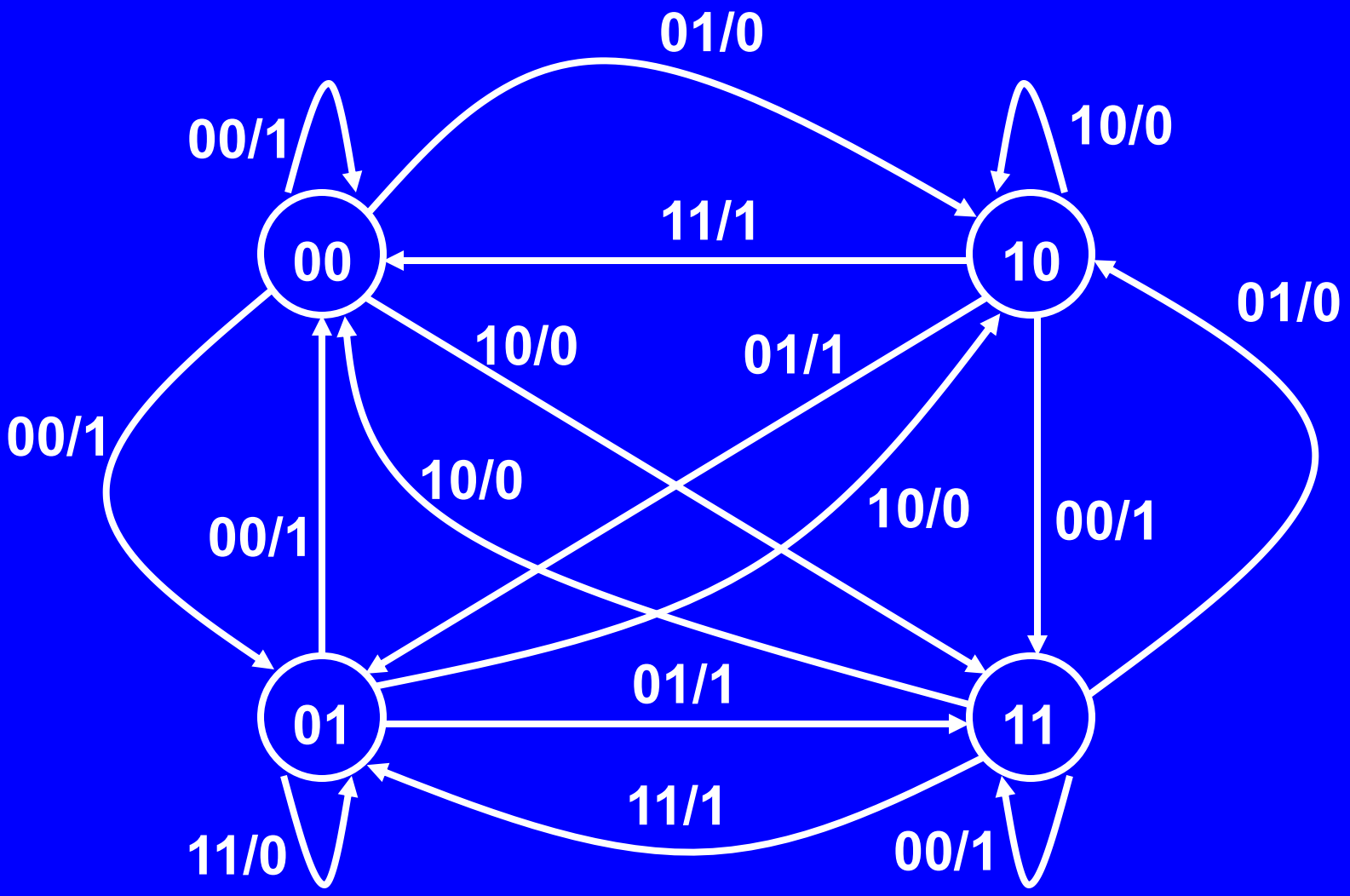
Πίνακες διέγερσης

Q(t)	Q(t+1)	S	R
0	0	0	X
0	1	1	0
1	0	0	1
1	1	X	0

Q(t)	Q(t+1)	J	K
0	0	0	X
0	1	1	X
1	0	X	1
1	1	X	0

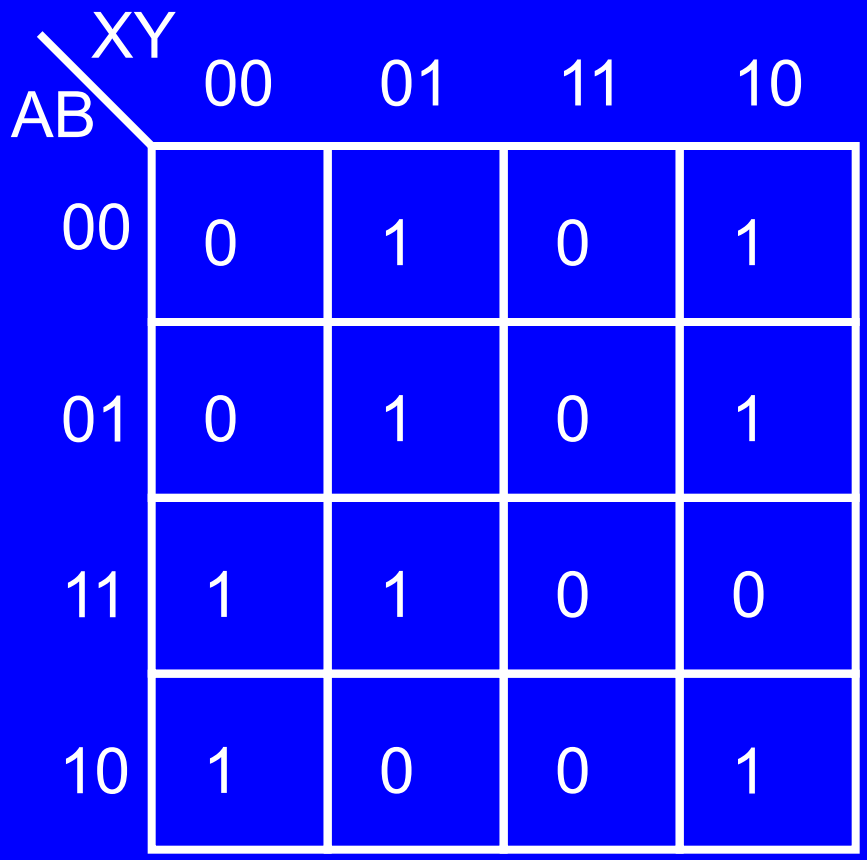
Q(t)	Q(t+1)	D
0	0	0
0	1	1
1	0	0
1	1	1

Q(t)	Q(t+1)	T
0	0	0
0	1	1
1	0	1
1	1	0


01/0
00/1
10/0
11/1
00
10
01/0
10/0
01/1
00/1
10/0
10/0
00/1
00/1
01/1
01
11
11/1
11/0
00/1

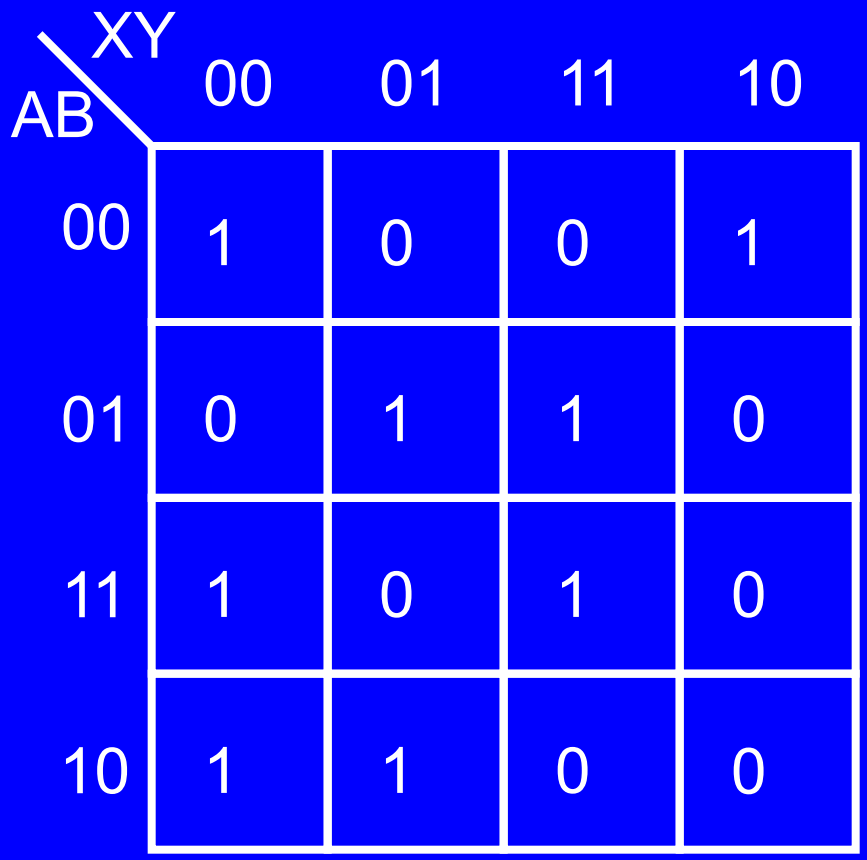
A	B	X	Y	A	B	Z
0	0	0	0	0	1	1
0	0	0	1	1	0	0
0	0	1	0	1	1	0
0	0	1	1	0	0	1
0	1	0	0	0	0	1
0	1	0	1	1	1	1
0	1	1	0	1	0	0
0	1	1	1	0	1	0
1	0	0	0	1	1	1
1	0	0	1	0	1	1
1	0	1	0	1	0	0
1	0	1	1	0	0	1
1	1	0	0	1	1	1
1	1	0	1	1	0	0
1	1	1	0	0	0	0
1	1	1	1	0	1	1

A	B	X	Y	DA	DB	Z
0	0	0	0	0	1	1
0	0	0	1	1	0	0
0	0	1	0	1	1	0
0	0	1	1	0	0	1
0	1	0	0	0	0	1
0	1	0	1	1	1	1
0	1	1	0	1	0	0
0	1	1	1	0	1	0
1	0	0	0	1	1	1
1	0	0	1	0	1	1
1	0	1	0	1	0	0
1	0	1	1	0	0	1
1	1	0	0	1	1	1
1	1	0	1	1	0	0
1	1	1	0	0	0	0
1	1	1	1	0	1	1

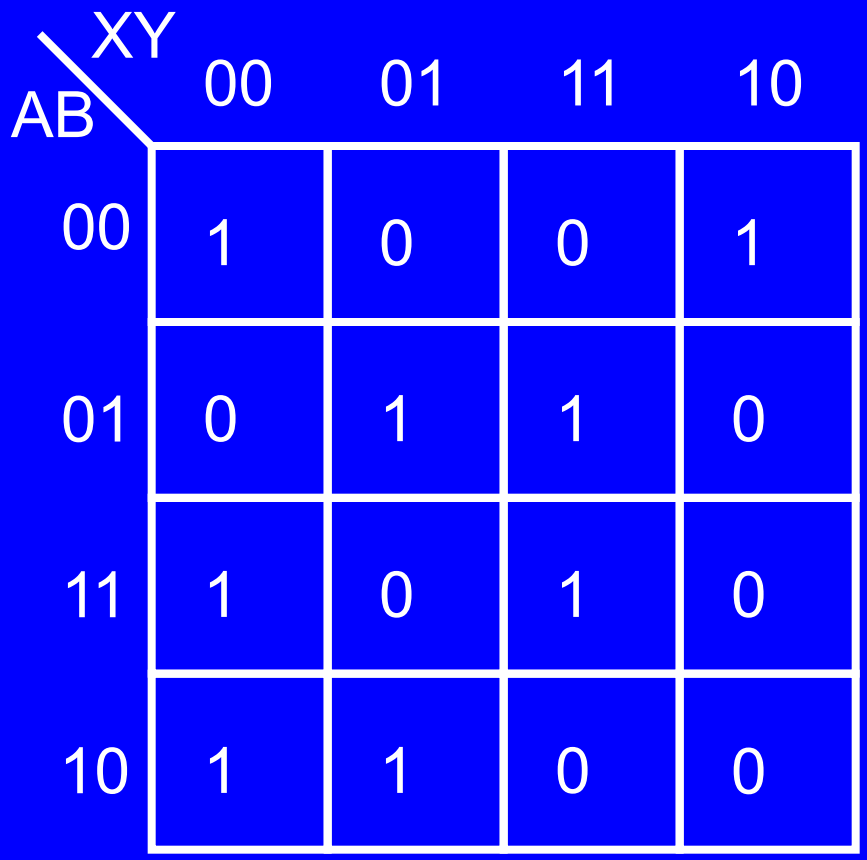

XY
AB
00
01
11
10
00
0
1
0
1
01
0
1
0
1
11
1
1
0
0
10
1
0
0
1

DA=AX'Y'+BX'Y+A'X'Y+A'XY'+B'XY'

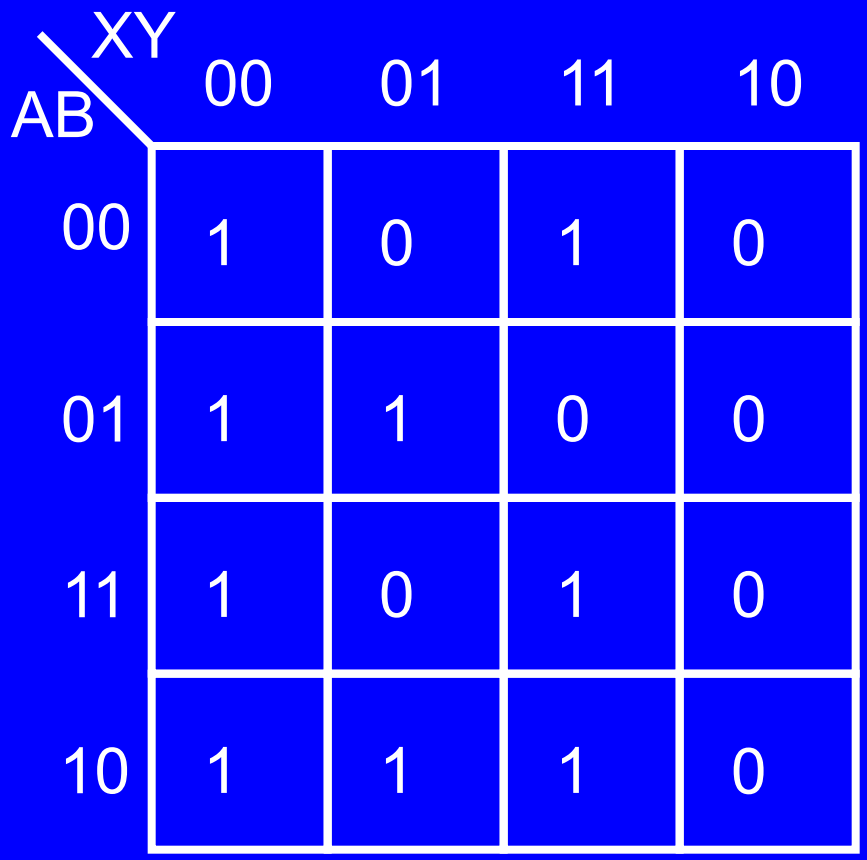
AB \ XY	00	01	11	10
00	0	1	0	1
01	0	1	0	1
11	1	1	0	0
10	1	0	0	1


XY
AB
00
01
11
10
00
01
11
10
1
0
0
1
0
1
1
0
1
0
1
0
1
1
0
0

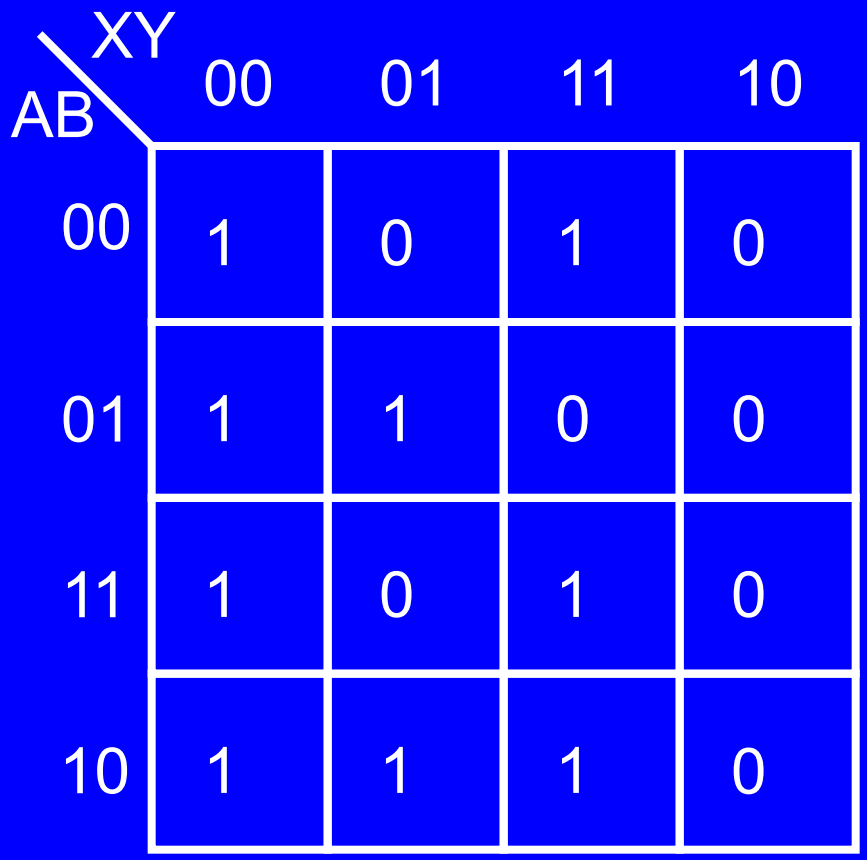
DB=AX'Y'+B'X'Y'+A'BY+BXY+A'B'Y'



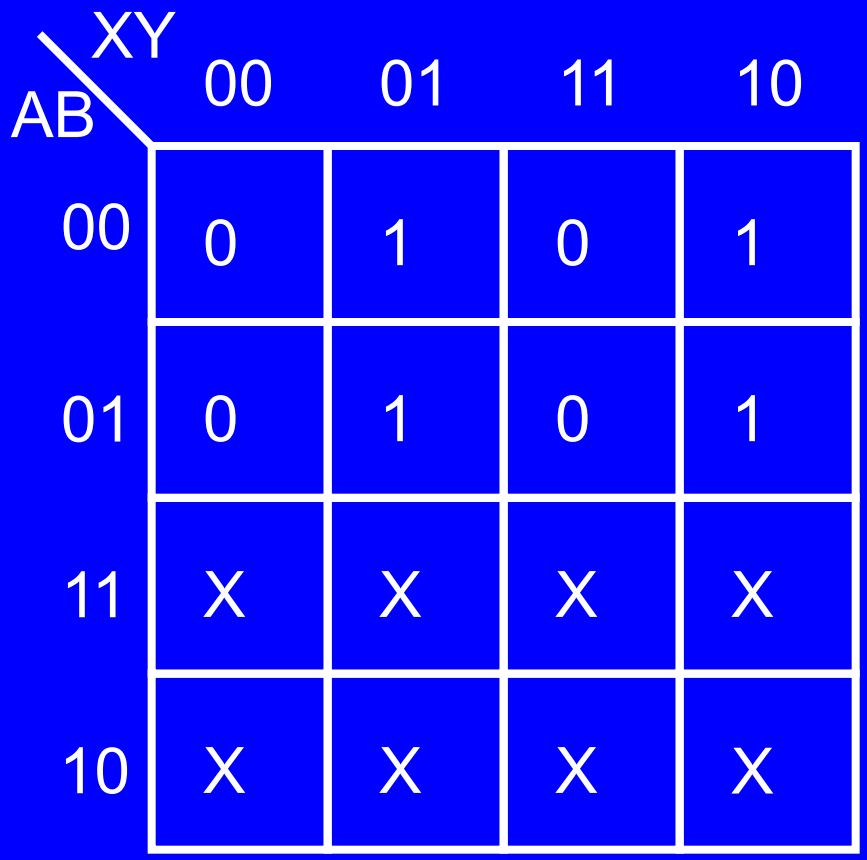
AB \ XY	00	01	11	10
00	1	0	0	1
01	0	1	1	0
11	1	0	1	0
10	1	1	0	0


XY
AB
00
01
11
10
00
1
0
1
0
01
1
1
0
0
11
1
0
1
0
10
1
1
1
0

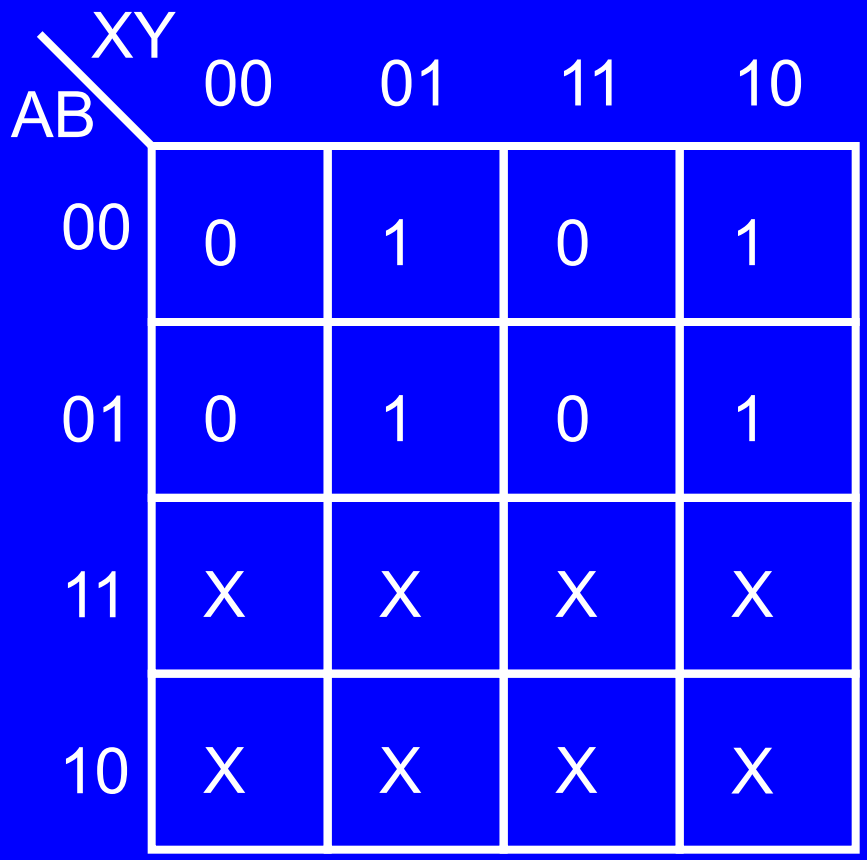
$Z = X'Y' + AB'X' + AB'Y + AXY + B'XY$

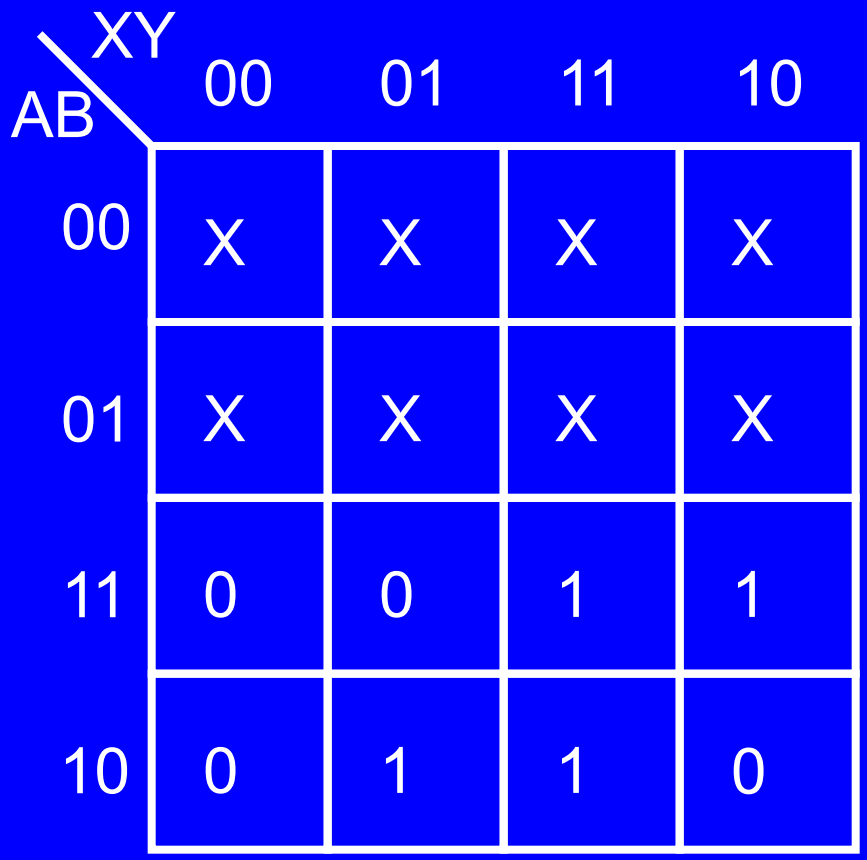


A	B	X	Y	A	B	JA	KA	JB	KB	Z
0	0	0	0	0	1	0	X	1	X	1
0	0	0	1	1	0	1	X	0	X	0
0	0	1	0	1	1	1	X	1	X	0
0	0	1	1	0	0	0	X	0	X	1
0	1	0	0	0	0	0	X	X	1	1
0	1	0	1	1	1	1	X	X	0	1
0	1	1	0	1	0	1	X	X	1	0
0	1	1	1	0	1	0	X	X	0	0
1	0	0	0	1	1	X	0	1	X	1
1	0	0	1	0	1	X	1	1	X	1
1	0	1	0	1	0	X	0	0	X	0
1	0	1	1	0	0	X	1	0	X	1
1	1	0	0	1	1	X	0	X	0	1
1	1	0	1	1	0	X	0	X	1	0
1	1	1	0	0	0	X	1	X	1	0
1	1	1	1	0	1	X	1	X	0	1

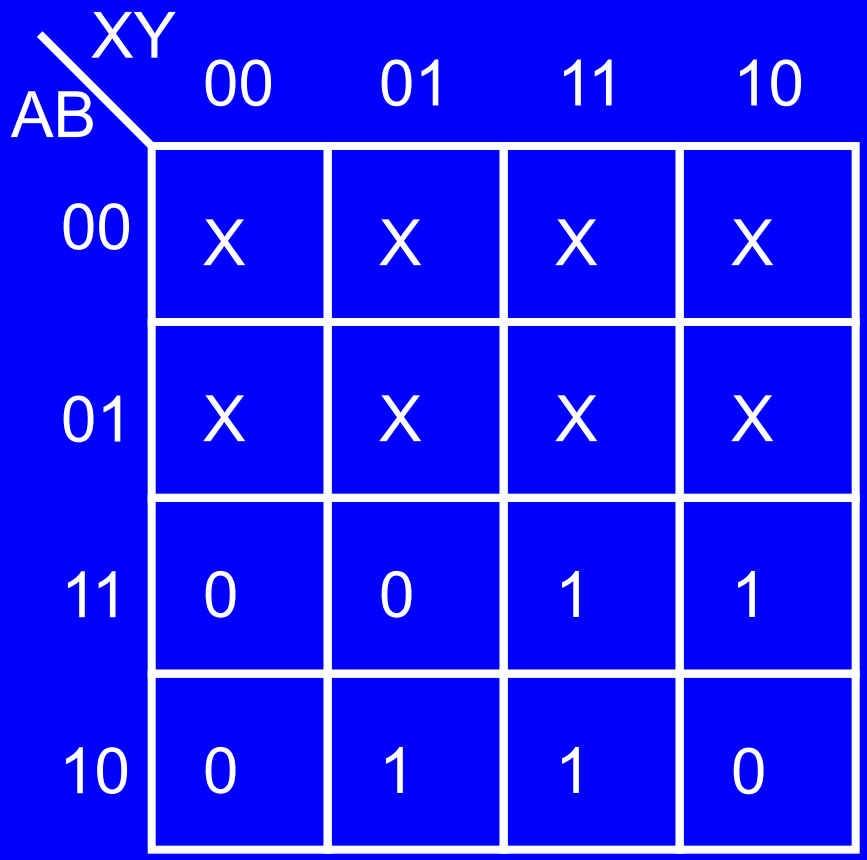

XY
AB
00
01
11
10
00
0
1
0
1
01
0
1
0
1
11
X
X
X
X
10
X
X
X
X

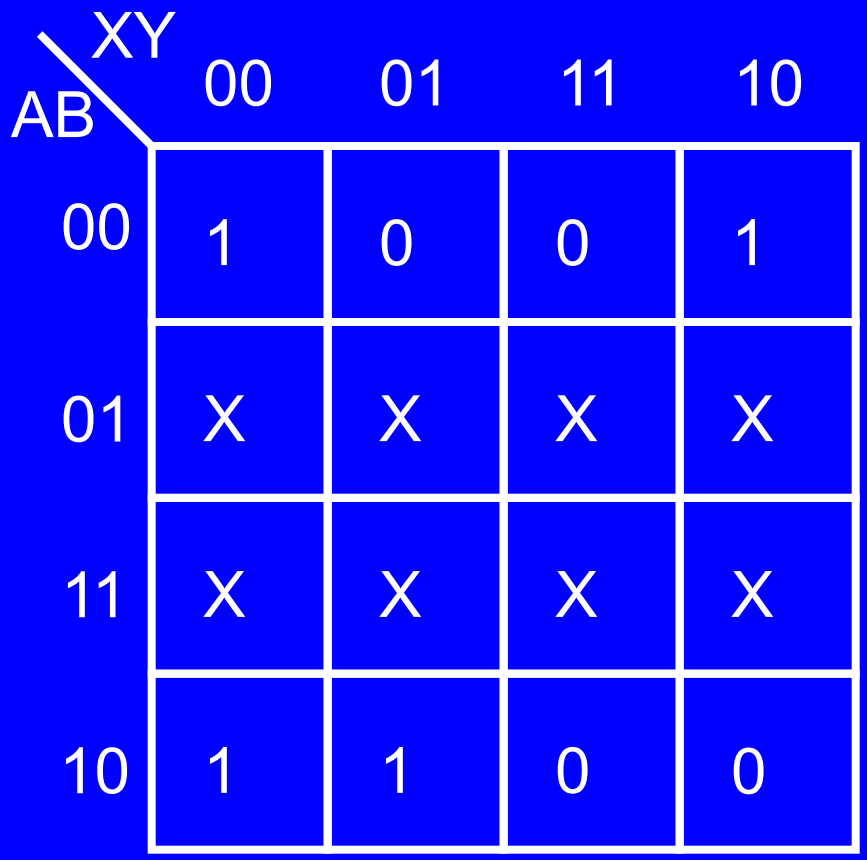
JA=X'Y+XY'



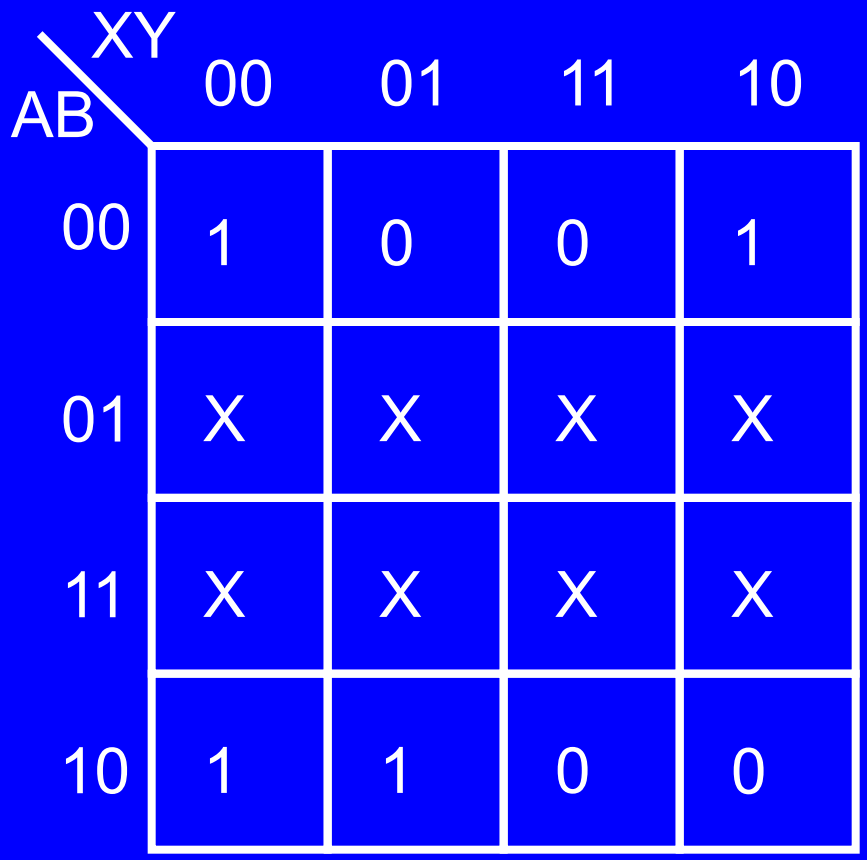

XY
AB
00
01
11
10
00
X
X
X
X
01
X
X
X
X
11
0
0
1
1
10
0
1
1
0

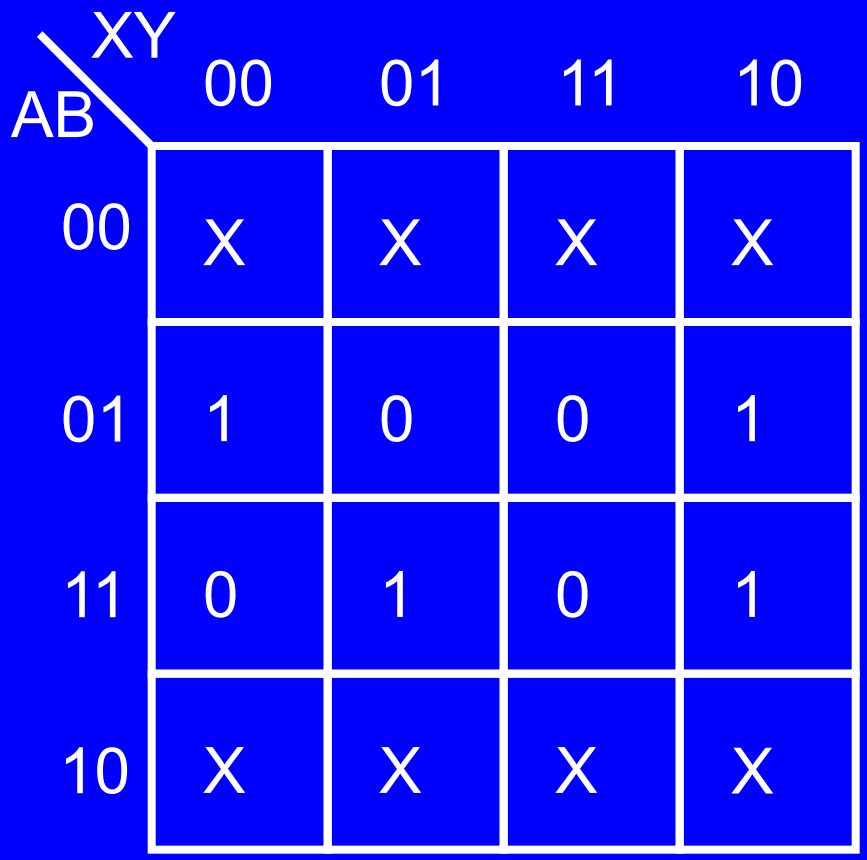
KA=B’Y+BX



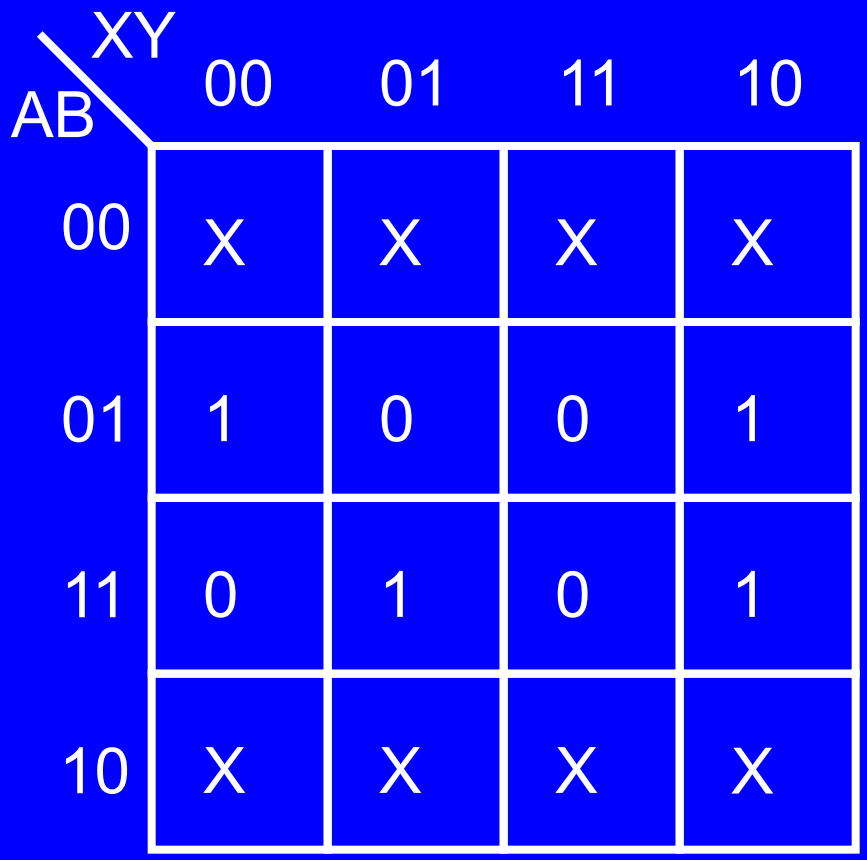

XY
AB
00
01
11
10
00
1
0
0
1
01
X
X
X
X
11
X
X
X
X
10
1
1
0
0

JB=AX'+A'Y'

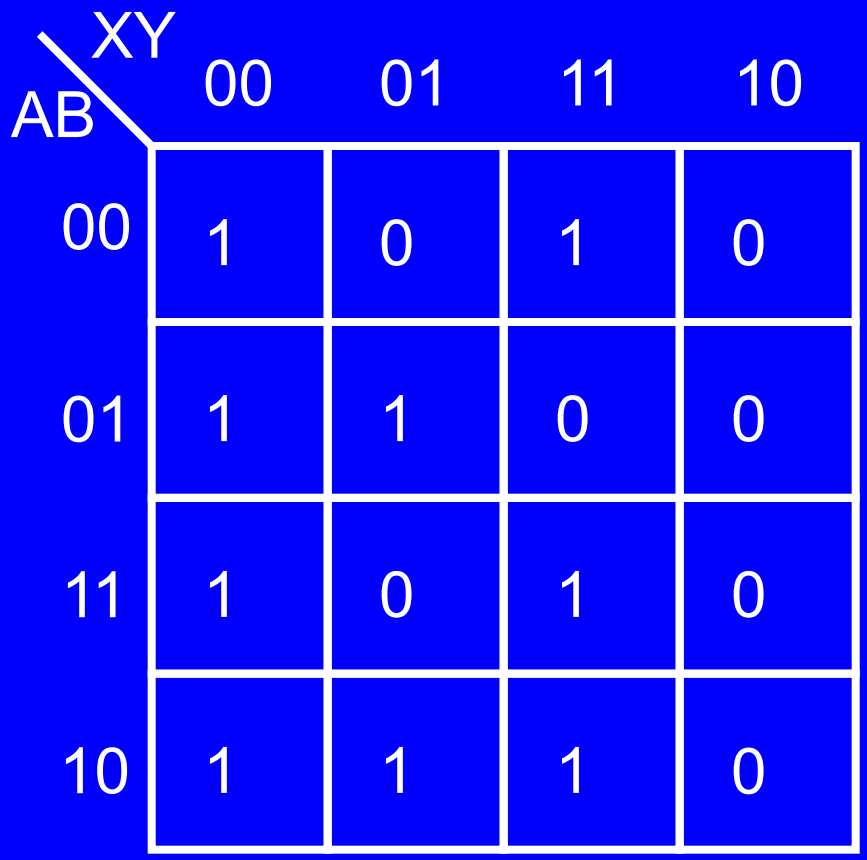


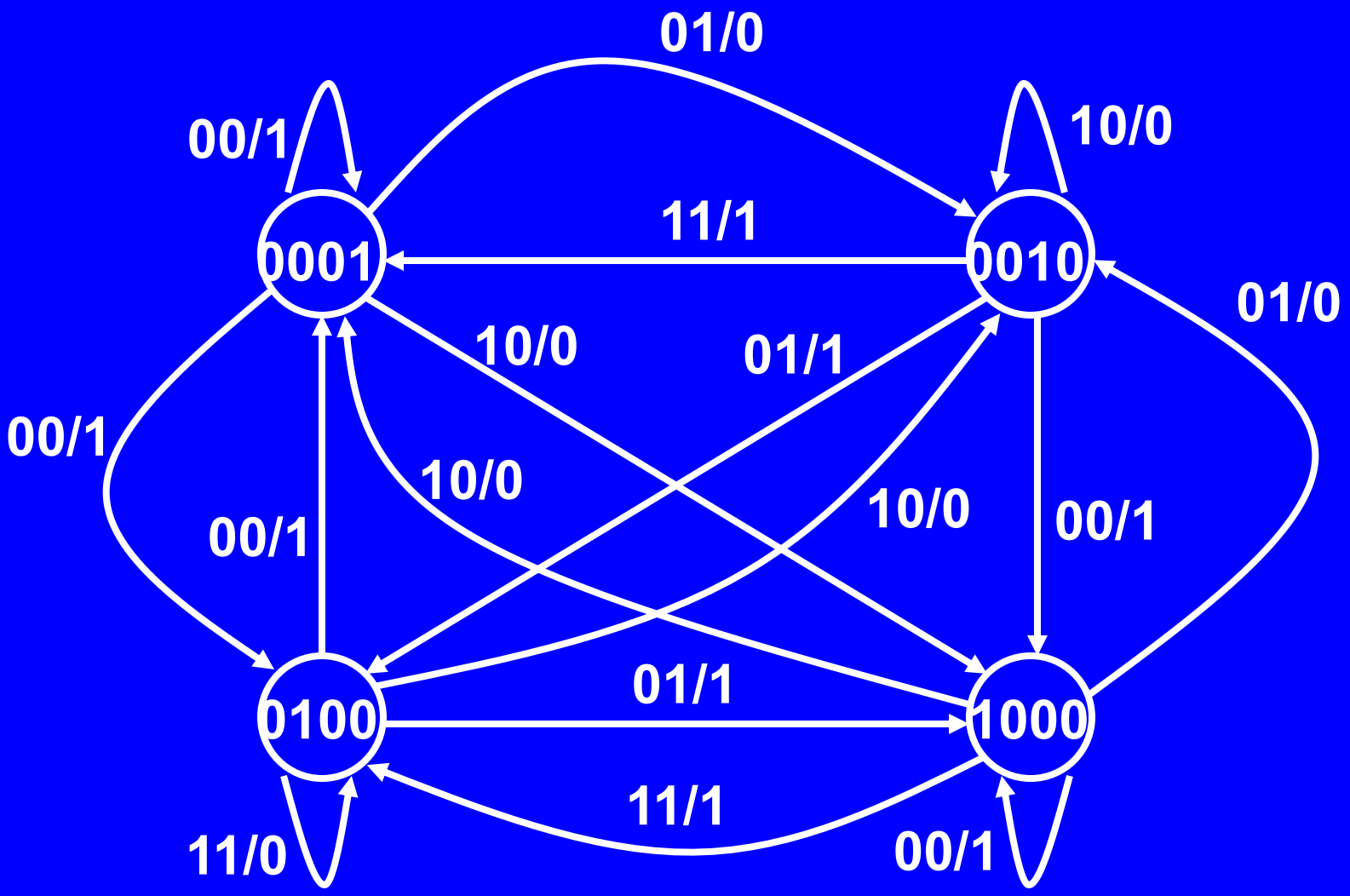

XY
AB
00
01
11
10
00
X
X
X
X
01
1
0
0
1
11
0
1
0
1
10
X
X
X
X

KB=XY'+A'Y'+AX'Y



$Z = X'Y' + AB'X' + AB'Y + AXY + B'XY$




01/0
00/1
10/0
11/1
0001
0010
01/0
10/0
01/1
00/1
10/0
10/0
00/1
00/1
01/1
0100
1000
11/1
11/0
00/1

A	B	C	D	X	Y	A	B	C	D	Z
0	0	0	1	0	0	0	1	0	0	1
0	0	0	1	0	1	0	0	1	0	0
0	0	0	1	1	0	1	0	0	0	0
0	0	0	1	1	1	0	0	0	1	1
0	1	0	0	0	0	0	0	0	1	1
0	1	0	0	0	1	1	0	0	0	1
0	1	0	0	1	0	0	0	1	0	0
0	1	0	0	1	1	0	1	0	0	0
0	0	1	0	0	0	1	0	0	0	1
0	0	1	0	0	1	0	1	0	0	1
0	0	1	0	1	0	0	0	1	0	0
0	0	1	0	1	1	0	0	0	1	1
1	0	0	0	0	0	1	0	0	0	1
1	0	0	0	0	1	0	0	1	0	0
1	0	0	0	1	0	0	0	0	1	0
1	0	0	0	1	1	0	1	0	0	1

A	B	C	D	X	Y	DA	DB	DC	DD	Z
0	0	0	1	0	0	0	1	0	0	1
0	0	0	1	0	1	0	0	1	0	0
0	0	0	1	1	0	1	0	0	0	0
0	0	0	1	1	1	0	0	0	1	1
0	1	0	0	0	0	0	0	0	1	1
0	1	0	0	0	1	1	0	0	0	1
0	1	0	0	1	0	0	0	1	0	0
0	1	0	0	1	1	0	1	0	0	0
0	0	1	0	0	0	1	0	0	0	1
0	0	1	0	0	1	0	1	0	0	1
0	0	1	0	1	0	0	0	1	0	0
0	0	1	0	1	1	0	0	0	1	1
1	0	0	0	0	0	1	0	0	0	1
1	0	0	0	0	1	0	0	1	0	0
1	0	0	0	1	0	0	0	0	1	0
1	0	0	0	1	1	0	1	0	0	1

A	B	C	D	X	Y	DA	DB	DC	DD	Z
0	0	0	1	0	0	0	1	0	0	1
0	0	0	1	0	1	0	0	1	0	0
0	0	0	1	1	0	1	0	0	0	0
0	0	0	1	1	1	0	0	0	1	1
0	1	0	0	0	0	0	0	0	1	1
0	1	0	0	0	1	1	0	0	0	1
0	1	0	0	1	0	0	0	1	0	0
0	1	0	0	1	1	0	1	0	0	0
0	0	1	0	0	0	1	0	0	0	1
0	0	1	0	0	1	0	1	0	0	1
0	0	1	0	1	0	0	0	1	0	0
0	0	1	0	1	1	0	0	0	1	1
1	0	0	0	0	0	1	0	0	0	1
1	0	0	0	0	1	0	0	1	0	0
1	0	0	0	1	0	0	0	0	1	0
1	0	0	0	1	1	0	1	0	0	1

DA=DXY'+BX'Y+CX'Y'+AX'Y'

DB=DX'Y'+BXY+CX'Y+AXY

DC=DX'Y+BXY'+CXY'+AX'Y

DD=DXY+BX'Y'+CXY+AXY'

Z=DX'Y'+DXY+BX'Y'+BX'Y+CX'Y'+CX'Y
+CXY+AX'Y'+AXY

A	B	C	D	X	Y	DA	DB	DC	DD	Z
0	0	0	1	0	0	0	1	0	0	1
0	0	0	1	0	1	0	0	1	0	0
0	0	0	1	1	0	1	0	0	0	0
0	0	0	1	1	1	0	0	0	1	1
0	1	0	0	0	0	0	0	0	1	1
0	1	0	0	0	1	1	0	0	0	1
0	1	0	0	1	0	0	0	1	0	0
0	1	0	0	1	1	0	1	0	0	0
0	0	1	0	0	0	1	0	0	0	1
0	0	1	0	0	1	0	1	0	0	1
0	0	1	0	1	0	0	0	1	0	0
0	0	1	0	1	1	0	0	0	1	1
1	0	0	0	0	0	1	0	0	0	1
1	0	0	0	0	1	0	0	1	0	0
1	0	0	0	1	0	0	0	0	1	0
1	0	0	0	1	1	0	1	0	0	1

DA=DXY'+BX'Y+CX'Y'+AX'Y'

DB=DX'Y'+BXY+CX'Y+AXY

DC=DX'Y+BXY'+CXY'+AX'Y

DD=DXY+BX'Y'+CXY+AXY'

Z=DX'Y'+CX'Y'+BX'Y'+AX'Y'+DXY+CXY+AXY+BX'Y+CX'Y

A	B	C	D	X	Y	DA	DB	DC	DD	Z
0	0	0	1	0	0	0	1	0	0	1
0	0	0	1	0	1	0	0	1	0	0
0	0	0	1	1	0	1	0	0	0	0
0	0	0	1	1	1	0	0	0	1	1
0	1	0	0	0	0	0	0	0	1	1
0	1	0	0	0	1	1	0	0	0	1
0	1	0	0	1	0	0	0	1	0	0
0	1	0	0	1	1	0	1	0	0	0
0	0	1	0	0	0	1	0	0	0	1
0	0	1	0	0	1	0	1	0	0	1
0	0	1	0	1	0	0	0	1	0	0
0	0	1	0	1	1	0	0	0	1	1
1	0	0	0	0	0	1	0	0	0	1
1	0	0	0	0	1	0	0	1	0	0
1	0	0	0	1	0	0	0	0	1	0
1	0	0	0	1	1	0	1	0	0	1

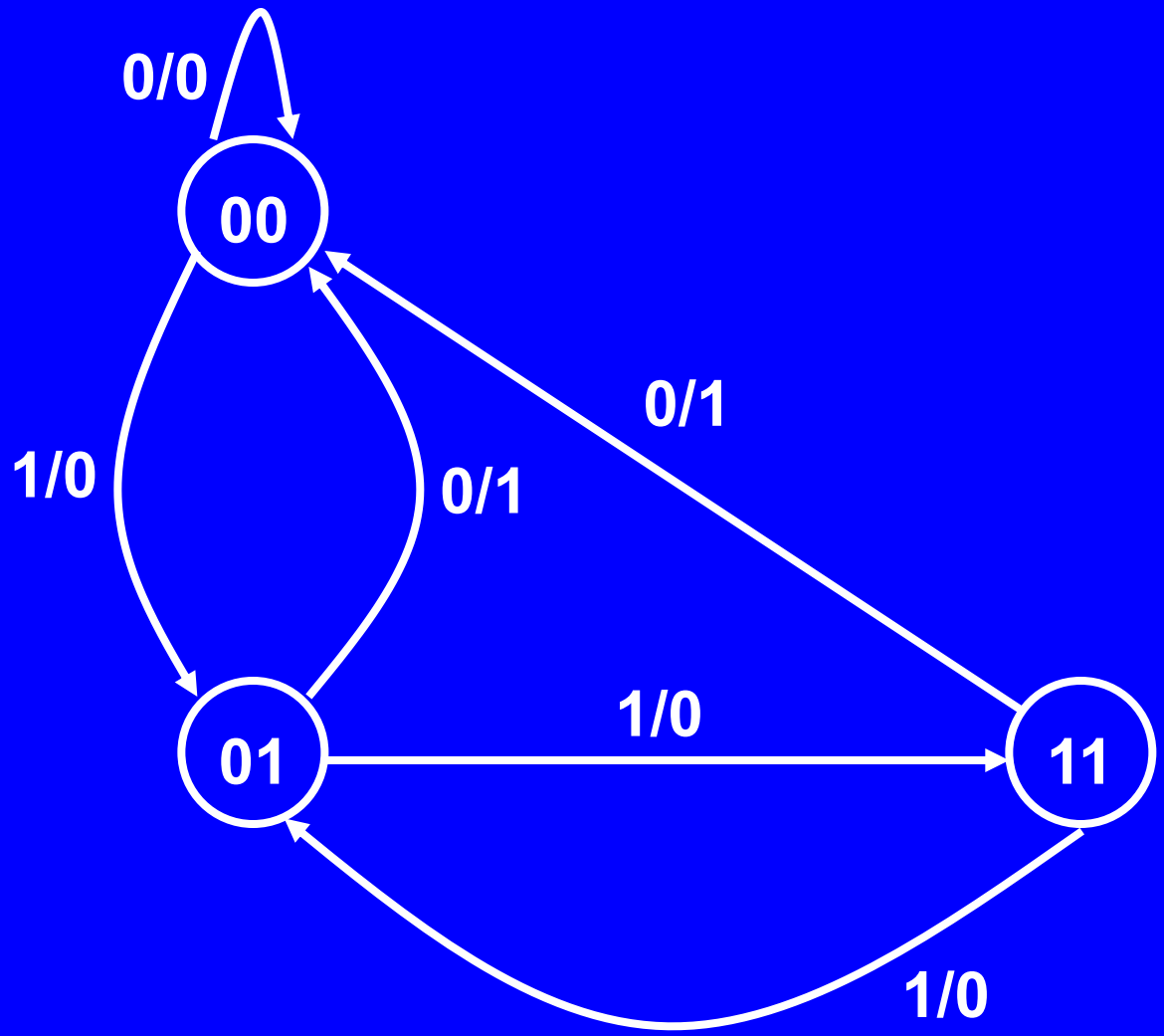
DA=DXY'+BX'Y+CX'Y'+AX'Y'

DB=DX'Y'+BXY+CX'Y+AXY

DC=DX'Y+BXY'+CXY'+AX'Y

DD=DXY+BX'Y'+CXY+AXY'

Z=X'Y'+B'XY+BX'Y+CX'Y


0/0
00
0/1
1/0
0/1
1/0
01
11
1/0

Αρχική		Είσοδος	Επόμενη		Έξοδος
A	B	X	A	B	Y
0	0	0	0	0	0
0	0	1	0	1	0
0	1	0	0	0	1
0	1	1	1	1	0
1	0	0	X	X	X
1	0	1	X	X	X
1	1	0	0	0	1
1	1	1	0	1	0

DA

A \ BX	00	01	11	10
0	0	0	1	0
1	X	X	0	0

DB

A \ BX	00	01	11	10
0	0	1	1	0
1	X	X	1	0

Y

A \ BX	00	01	11	10
0	0	0	0	1
1	X	X	0	1

DA

A \ BX	00	01	11	10
0	0	0	1	0
1	X	X	0	0

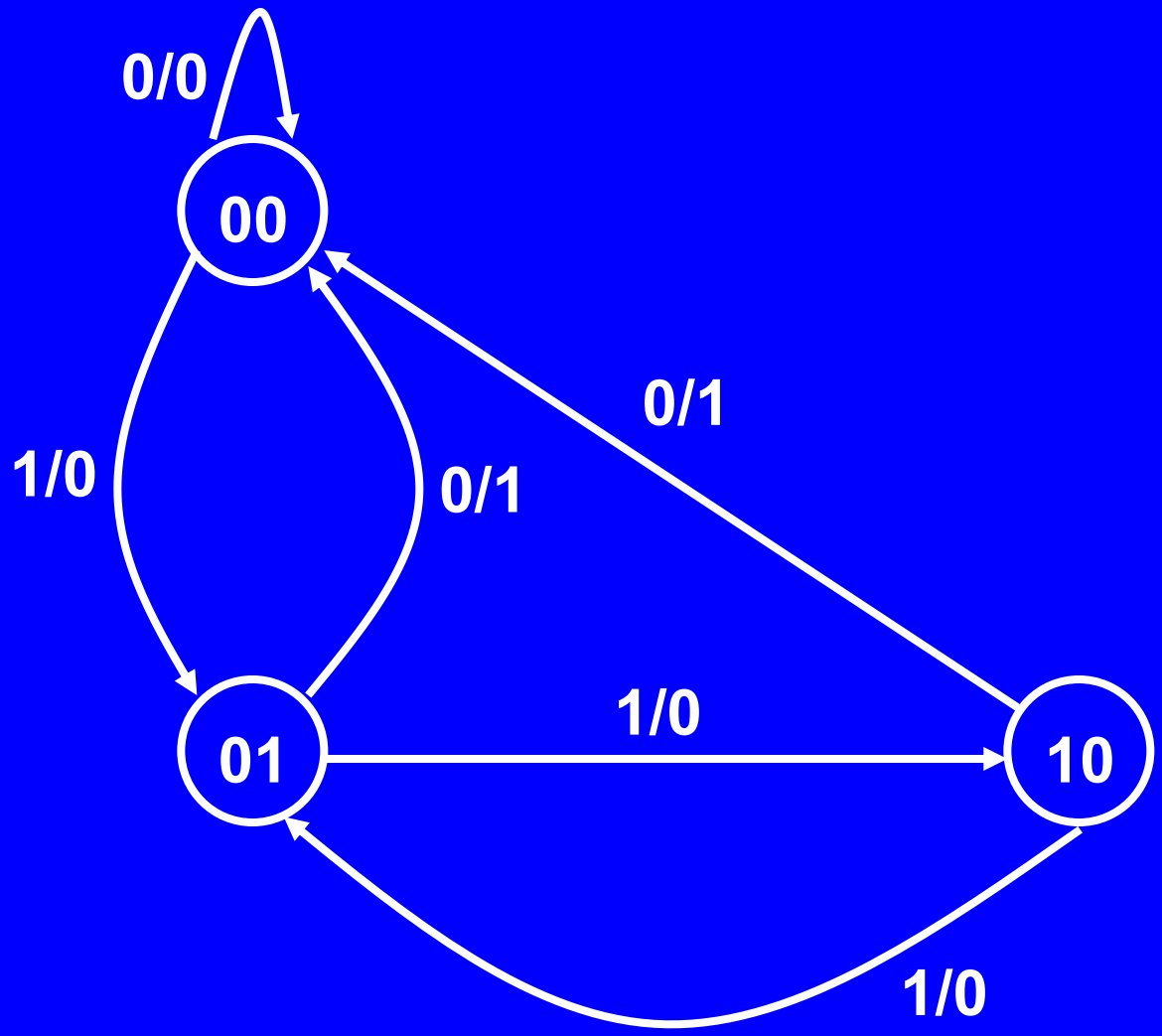
DA=A'BX
DB=X
Y=BX'

DB

A \ BX	00	01	11	10
0	0	1	1	0
1	X	X	1	0

Y

A \ BX	00	01	11	10
0	0	0	0	1
1	X	X	0	1


0/0
00
0/1
1/0
0/1
1/0
01
10
1/0

Αρχική		Είσοδος	Επόμενη		Έξοδος
A	B	X	A	B	Y
0	0	0	0	0	0
0	0	1	0	1	0
0	1	0	0	0	1
0	1	1	1	0	0
1	0	0	0	0	1
1	0	1	0	1	0
1	1	0	X	X	X
1	1	1	X	X	X

DA

A \ BX	00	01	11	10
0	0	0	1	0
1	0	0	X	X

DB

A \ BX	00	01	11	10
0	0	1	0	0
1	0	1	X	X

Y

A \ BX	00	01	11	10
0	0	0	0	1
1	1	0	X	X

DA

A \ BX	00	01	11	10
0	0	0	1	0
1	0	0	X	X

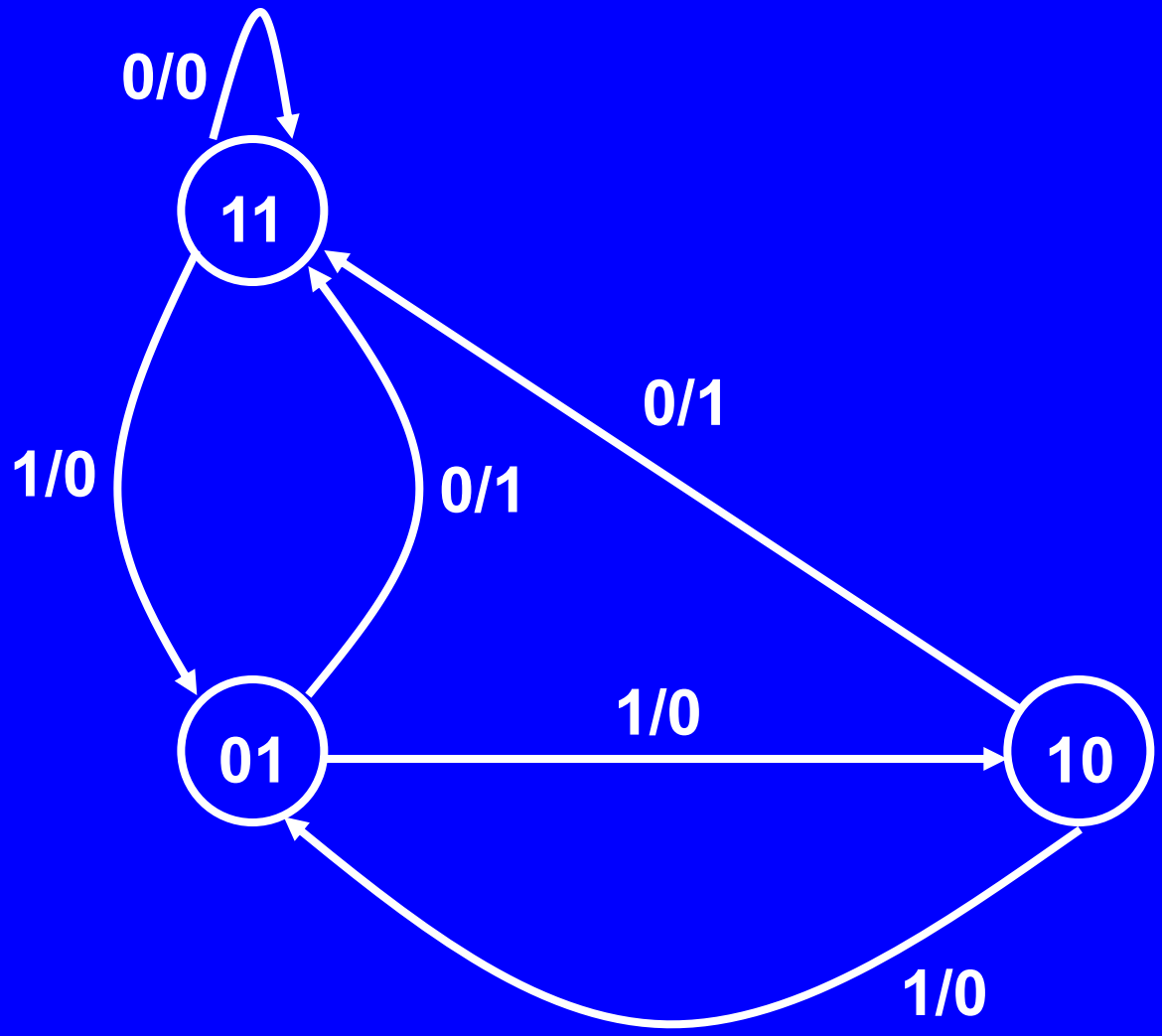
DA=BX
DB=B'X
Y=BX'+AX'

DB

A \ BX	00	01	11	10
0	0	1	0	0
1	0	1	X	X

Y

A \ BX	00	01	11	10
0	0	0	0	1
1	1	0	X	X


0/0
11
0/1
1/0
0/1
1/0
01
10
1/0

Αρχική		Είσοδος	Επόμενη		Έξοδος
A	B	X	A	B	Y
0	0	0	X	X	X
0	0	1	X	X	X
0	1	0	1	1	1
0	1	1	1	0	0
1	0	0	1	1	1
1	0	1	0	1	0
1	1	0	1	1	0
1	1	1	0	1	0

DA

A \ BX	00	01	11	10
0	X	X	1	1
1	1	0	0	1

DB

A \ BX	00	01	11	10
0	X	X	0	1
1	1	1	1	1

Y

A \ BX	00	01	11	10
0	X	X	0	1
1	1	0	0	0

DA

A \ BX	00	01	11	10
0	X	X	1	1
1	1	0	0	1

DA=A'+X'

DB=A+X'

Y=A'X'+B'X'

DB

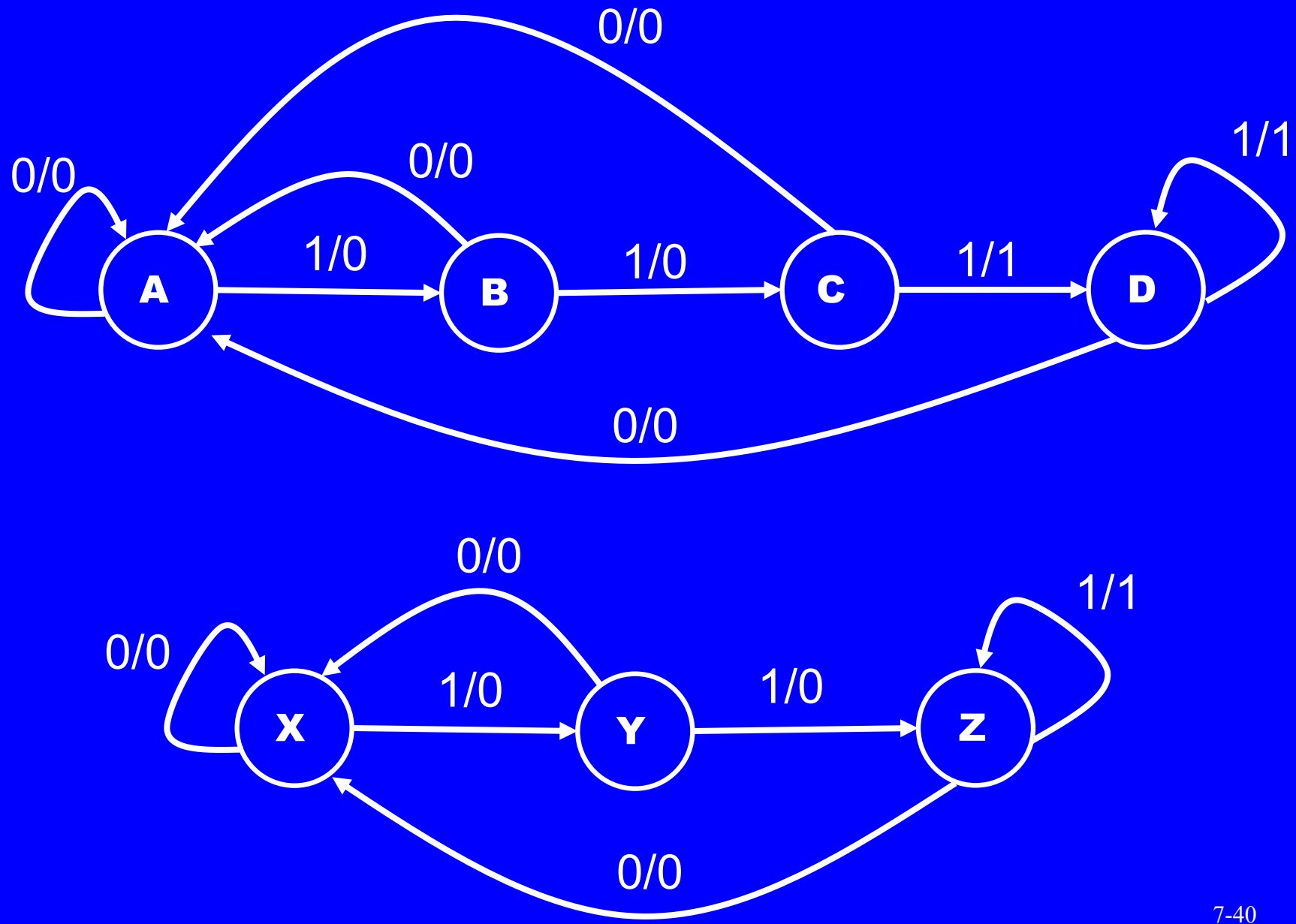
A \ BX	00	01	11	10
0	X	X	0	1
1	1	1	1	1

Y

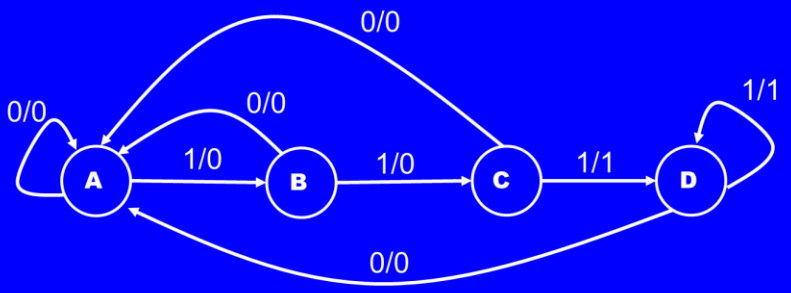
A \ BX	00	01	11	10
0	X	X	0	1
1	1	0	0	0

Ισοδύναμες καταστάσεις

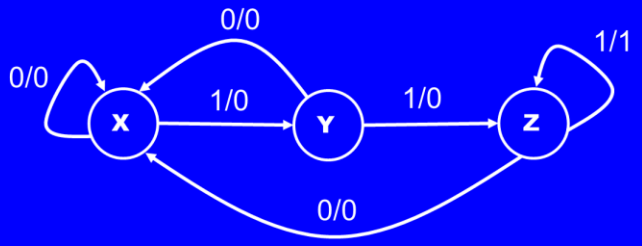
Όταν δύο καταστάσεις για κάθε είσοδο έχουν την ίδια έξοδο και την ίδια επόμενη κατάσταση λέγονται *ισοδύναμες*


0/0
0/0
0/0
1/1
1/0
1/0
1/1
A
B
C
D
0/0
0/0
1/1
0/0
1/0
1/0
X
Y
Z
0/0

Pres	in=0	in=1
A	A,0	B,0
B	A,0	C,0
C	A,0	D,1
D	A,0	D,1



Pres	in=0	in=1
X	X,0	Y,0
Y	X,0	Z,0
Z	X,0	Z,1



pres state	in=0	in=1
1	2,0	3,0
2	4,0	5,0
3	6,0	7,0
4	8,0	9,0
5	10,0	11,0
6	4,0	12,0
7	10,0	12,0
8	8,0	1,0
9	10,1	1,0
10	4,0	1,0
11	2,0	1,0
12	2,0	1,0

pres state	in=0	in=1
1	2,0	3,0
2	4,0	5,0
3	6,0	7,0
4	8,0	9,0
5	10,0	11,0
6	4,0	12,0
7	10,0	12,0
8	8,0	1,0
9	10,1	1,0
10	4,0	1,0
11	2,0	1,0
12	2,0	1,0

pres state	in=0	in=1
1	2,0	3,0
2	4,0	5,0
3	6,0	7,0
4	8,0	9,0
5	10,0	11,0
6	4,0	12,0
7	10,0	12,0
8	8,0	1,0
9	10,1	1,0
10	4,0	1,0
11	2,0	1,0
12	2,0	1,0

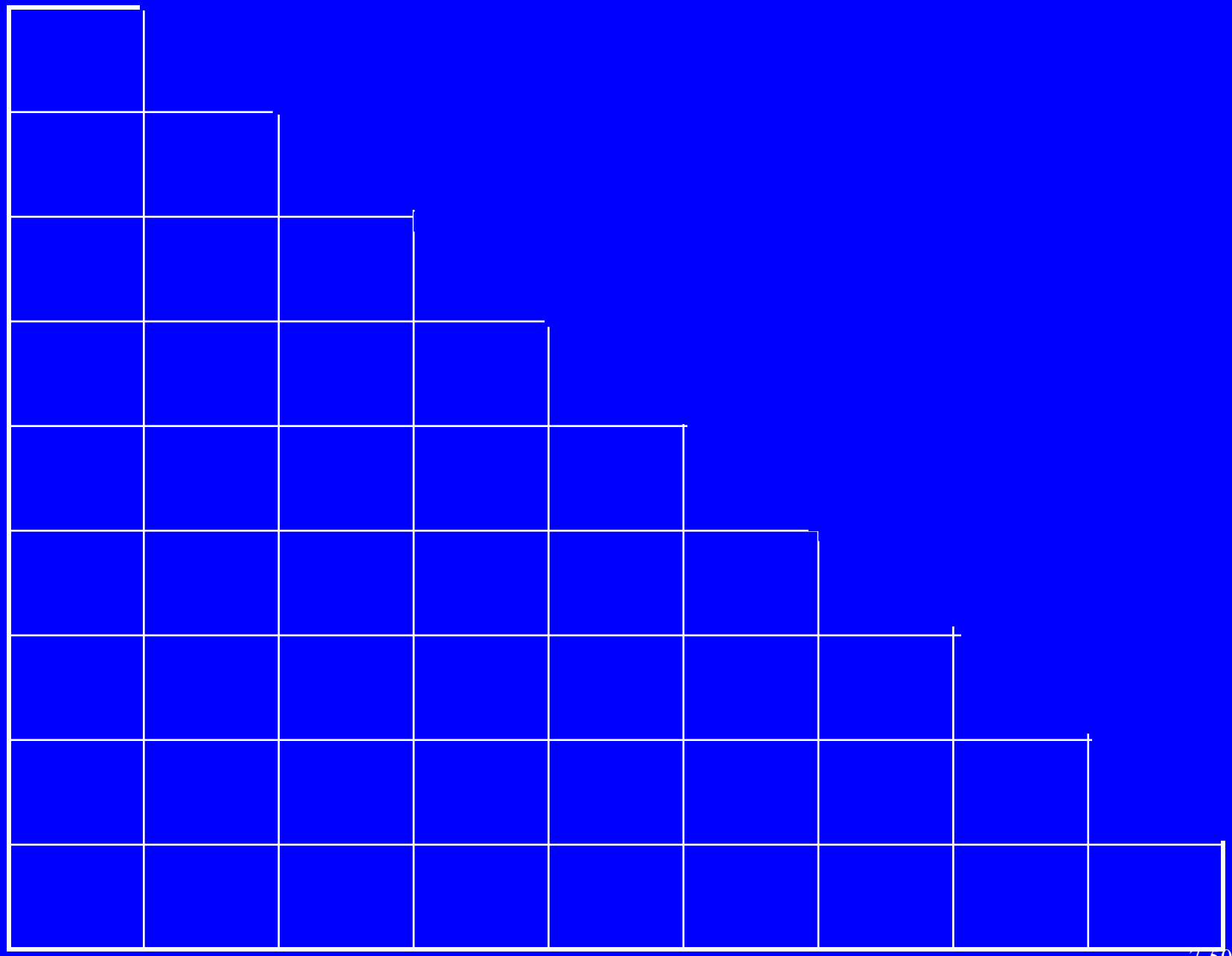
pres state	in=0	in=1
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2	4,0	5,0
3	6,0	7,0
4	8,0	9,0
5	10,0	11,0
6	4,0	11,0
7	10,0	11,0
8	8,0	1,0
9	10,1	1,0
10	4,0	1,0
11	2,0	1,0
12	2,0	1,0

pres state	in=0	in=1
1	2,0	3,0
2	4,0	5,0
3	6,0	7,0
4	8,0	9,0
5	10,0	11,0
6	4,0	11,0
7	10,0	11,0
8	8,0	1,0
9	10,1	1,0
10	4,0	1,0
11	2,0	1,0
12	2,0	1,0

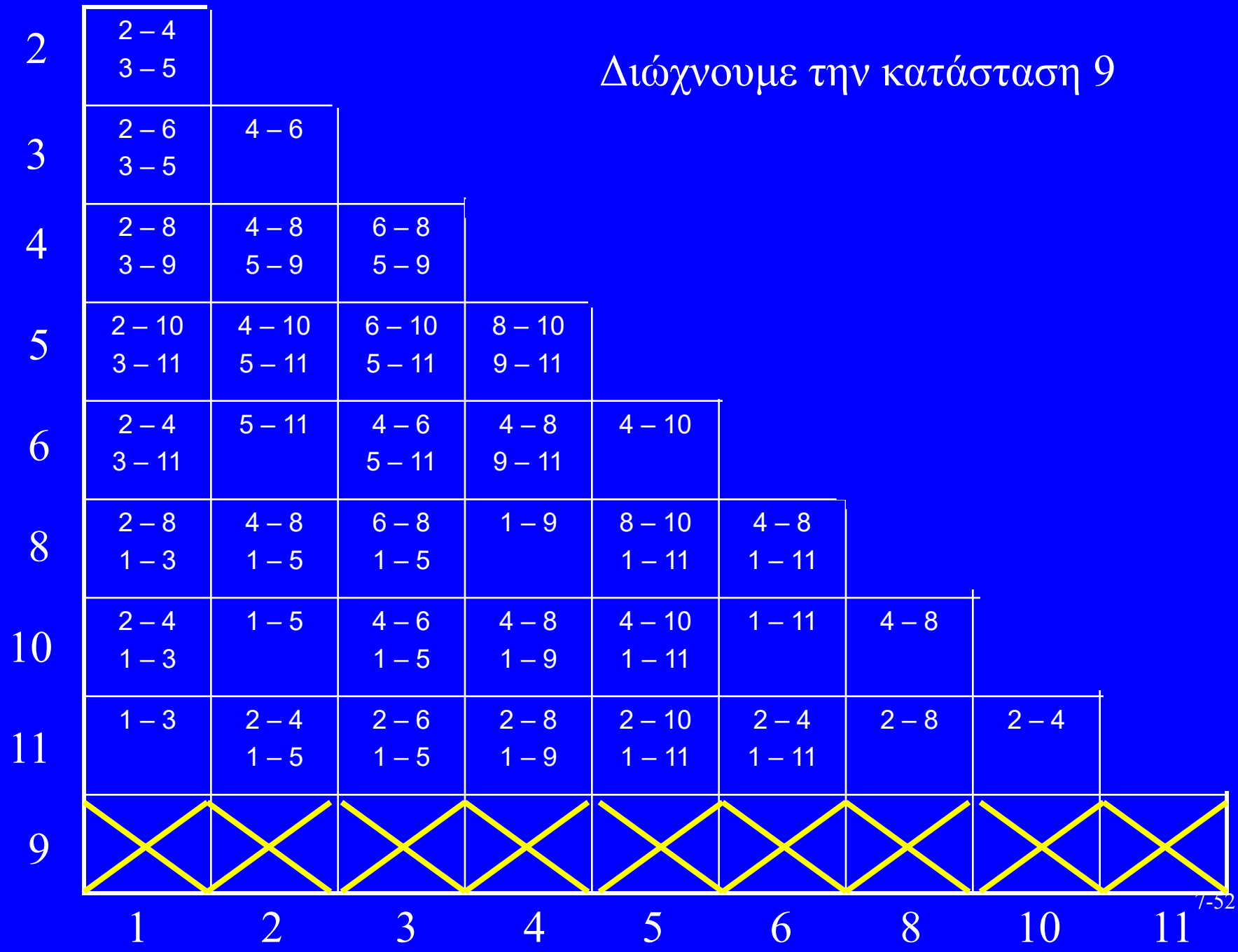
pres state	in=0	in=1
1	2,0	3,0
2	4,0	5,0
3	6,0	7,0
4	8,0	9,0
5	10,0	11,0
6	4,0	11,0
7	10,0	11,0
8	8,0	1,0
9	10,1	1,0
10	4,0	1,0
11	2,0	1,0
12	2,0	1,0

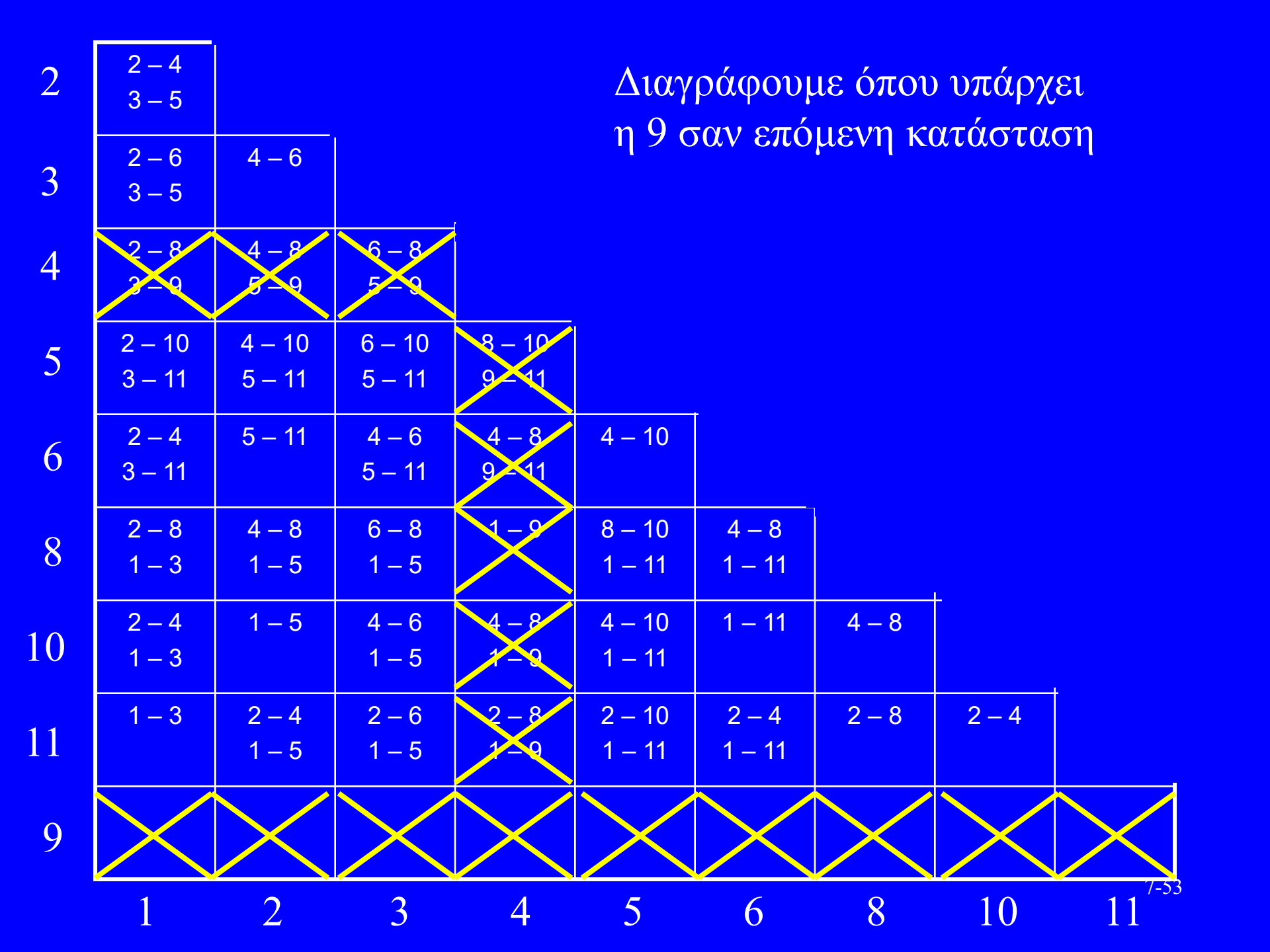
pres state	in=0	in=1
1	2,0	3,0
2	4,0	5,0
3	6,0	5,0
4	8,0	9,0
5	10,0	11,0
6	4,0	11,0
~~7~~	~~10,0~~	~~11,0~~
8	8,0	1,0
9	10,1	1,0
10	4,0	1,0
11	2,0	1,0
~~12~~	~~2,0~~	~~1,0~~

pres state	in=0	in=1
1	2,0	3,0
2	4,0	5,0
3	6,0	5,0
4	8,0	9,0
5	10,0	11,0
6	4,0	11,0
8	8,0	1,0
10	4,0	1,0
11	2,0	1,0
9	10,1	1,0

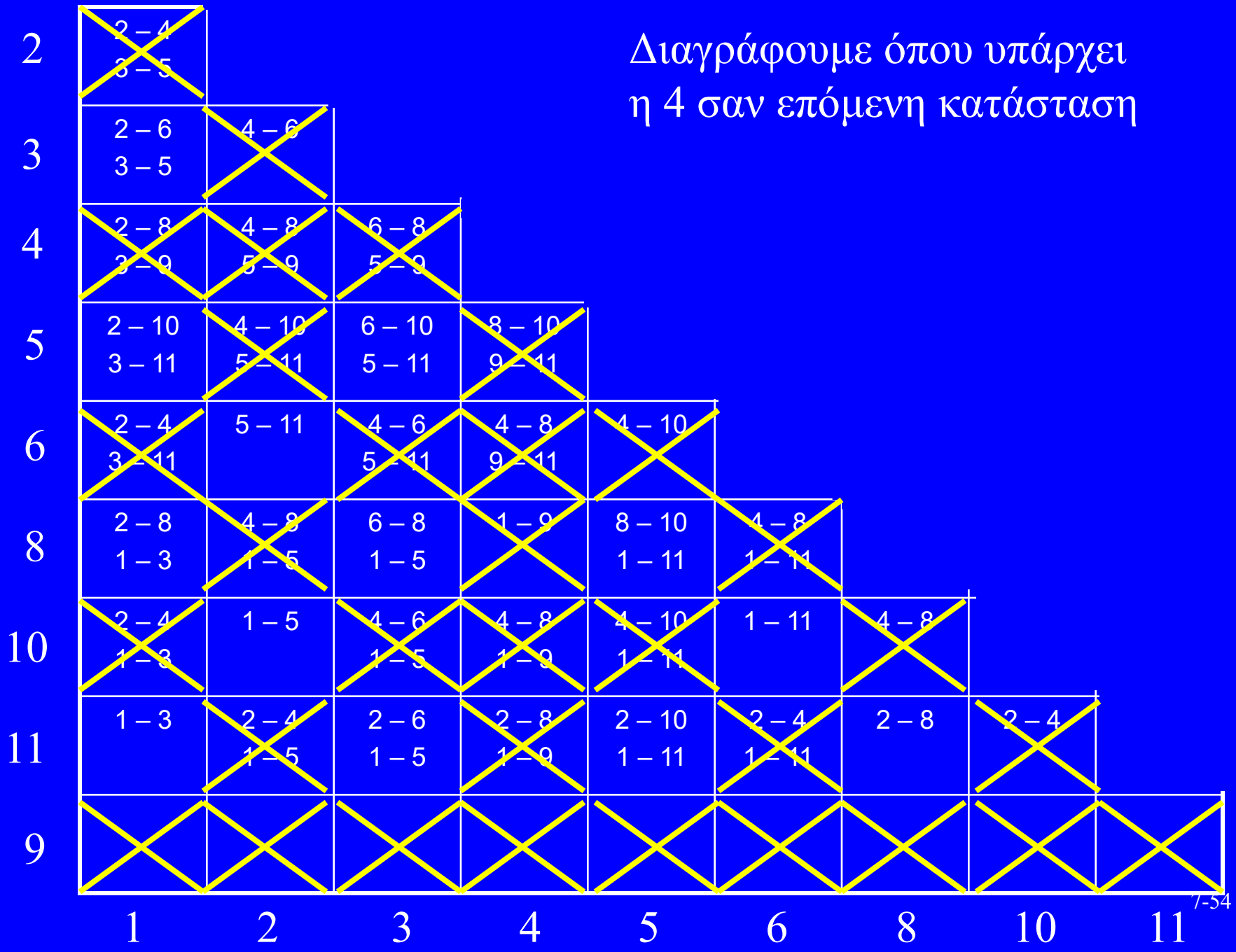


	1	2	3	4	5	6	8	10	11
2	2 – 4 3 – 5								
3	2 – 6 3 – 5	4 – 6							
4	2 – 8 3 – 9	4 – 8 5 – 9	6 – 8 5 – 9						
5	2 – 10 3 – 11	4 – 10 5 – 11	6 – 10 5 – 11	8 – 10 9 – 11					
6	2 – 4 3 – 11	5 – 11	4 – 6 5 – 11	4 – 8 9 – 11	4 – 10				
8	2 – 8 1 – 3	4 – 8 1 – 5	6 – 8 1 – 5	1 – 9	8 – 10 1 – 11	4 – 8 1 – 11			
10	2 – 4 1 – 3	1 – 5	4 – 6 1 – 5	4 – 8 1 – 9	4 – 10 1 – 11	1 – 11	4 – 8		
11	1 – 3	2 – 4 1 – 5	2 – 6 1 – 5	2 – 8 1 – 9	2 – 10 1 – 11	2 – 4 1 – 11	2 – 8	2 – 4	
9									


Διώχνουμε την κατάσταση 9
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10
11
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8 – 10
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4 – 6
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4 – 8
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4 – 8
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2 – 10
1 – 11
2 – 4
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2 – 8
2 – 4
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6
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10
11


Διαγράφουμε όπου υπάρχει
η 9 σαν επόμενη κατάσταση
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4 – 6
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6 – 8
5 – 9
2 – 10
3 – 11
4 – 10
5 – 11
6 – 10
5 – 11
8 – 10
9 – 11
2 – 4
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9 – 11
4 – 10
2 – 8
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6 – 8
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8 – 10
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4 – 8
1 – 11
2 – 4
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4 – 6
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4 – 8
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4 – 10
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4 – 8
1 – 3
2 – 4
1 – 5
2 – 6
1 – 5
2 – 8
1 – 9
2 – 10
1 – 11
2 – 4
1 – 11
2 – 8
2 – 4
1
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10
11

Διαγράφουμε όπου υπάρχει
η 4 σαν επόμενη κατάσταση




Διαγράφουμε τις υπόλοιπες μη συμβατές καταστάσεις
2
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8
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6 – 8
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8 – 10
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2 – 4
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4 – 6
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4 – 8
1 – 5
6 – 8
1 – 5
1 – 9
8 – 10
1 – 11
4 – 8
1 – 11
2 – 4
1 – 3
1 – 5
4 – 6
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4 – 8
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4 – 10
1 – 11
1 – 11
4 – 8
1 – 3
2 – 4
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2 – 6
1 – 5
2 – 8
1 – 9
2 – 10
1 – 11
2 – 4
1 – 11
2 – 8
2 – 4

Ελέγχουμε τις στήλες και έχουμε:

9 (9)

11 (9) (11)

10 (9) (11) (10)

8 (9) (11) (10) (8)

6 (9) (11) (6,10) (8)

5 (9) (5,11) (6,10) (8)

4 (9) (5,11) (6,10) (8) (4)

3 (9) (3,5,11) (6,10) (8) (4)

2 (9) (3,5,11) (2,6,10) (8) (4)

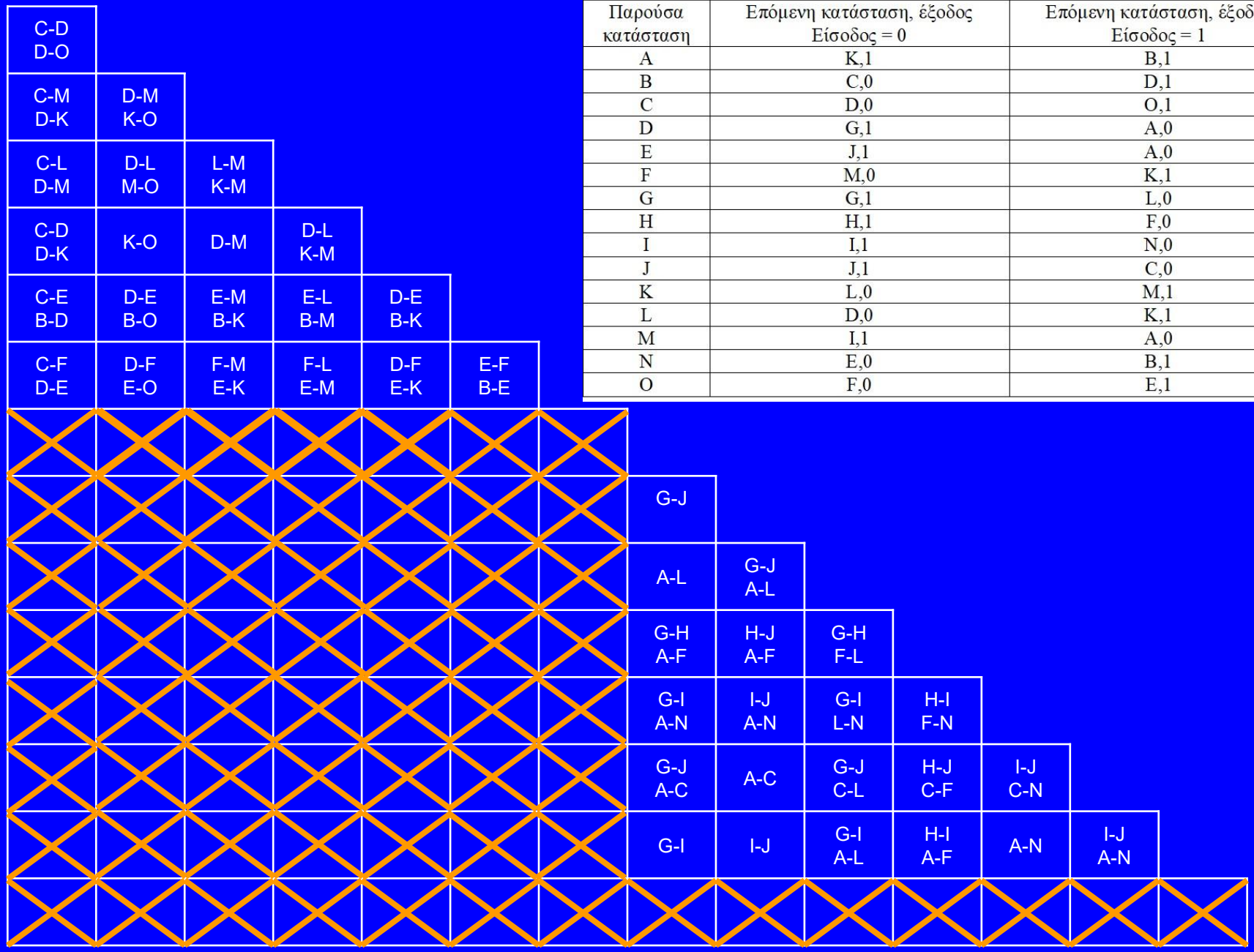
1 (9) (1,3,5,11) (2,6,10) (8) (4)

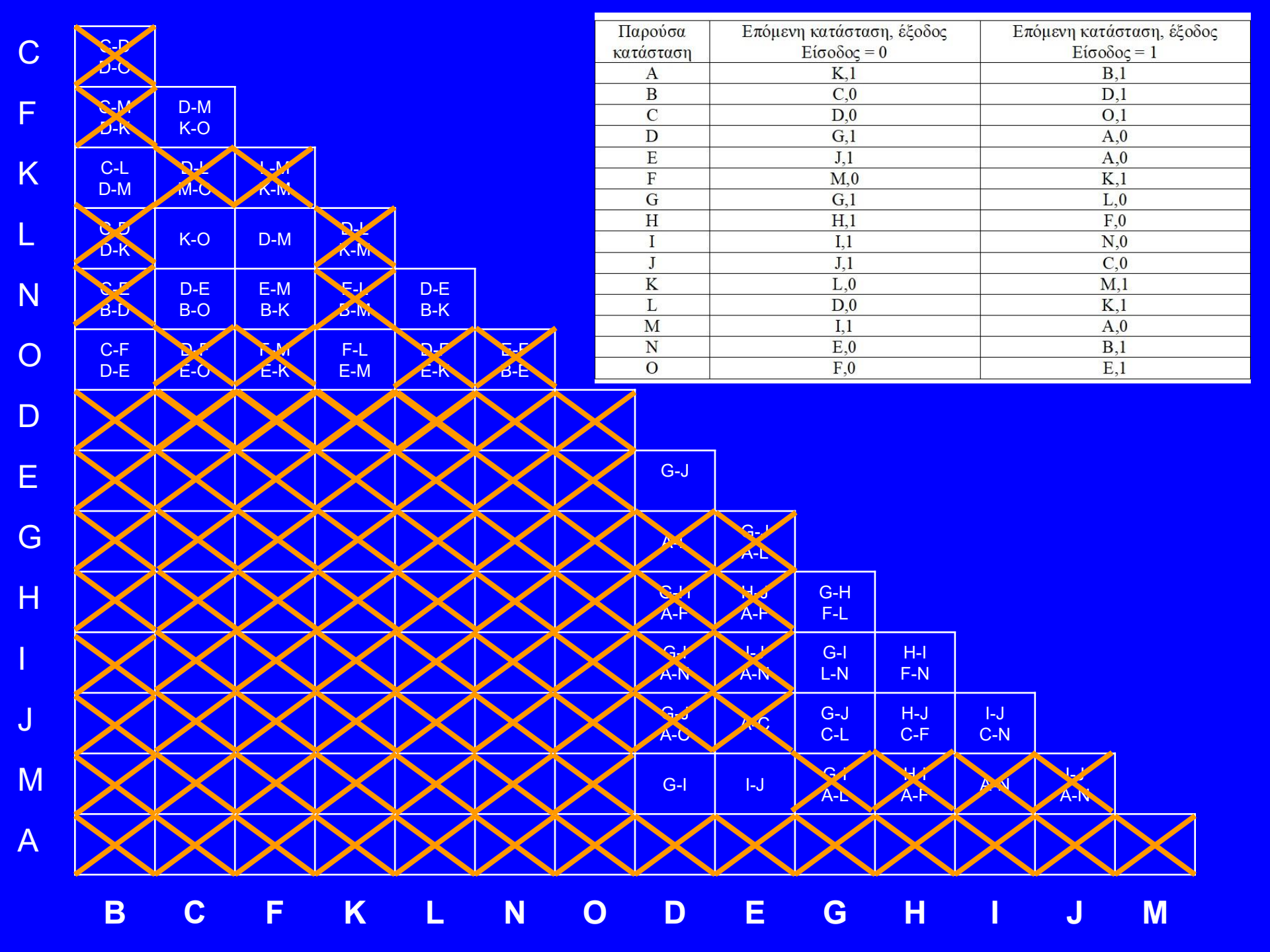
pres state	in=0	in=1
1	2,0	1,0
2	4,0	1,0
4	8,0	9,0
8	8,0	1,0
9	2,1	1,0

Παρούσα κατάσταση	Επόμενη κατάσταση, έξοδος Είσοδος = 0	Επόμενη κατάσταση, έξοδος Είσοδος = 1
A	K,1	B,1
B	C,0	D,1
C	D,0	O,1
D	G,1	A,0
E	J,1	A,0
F	M,0	K,1
G	G,1	L,0
H	H,1	F,0
I	I,1	N,0
J	J,1	C,0
K	L,0	M,1
L	D,0	K,1
M	I,1	A,0
N	E,0	B,1
O	F,0	E,1

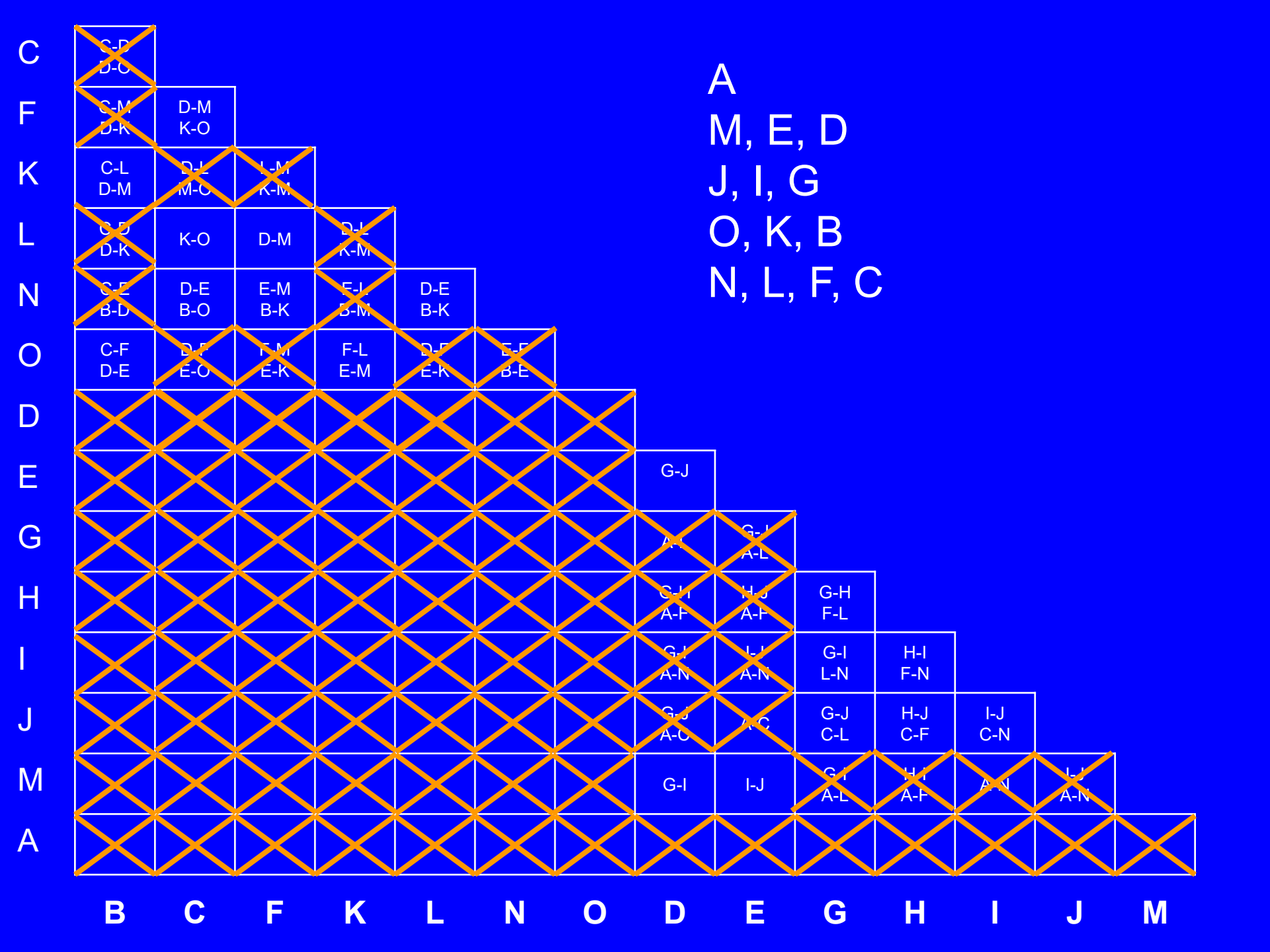

B 0,1
C 0,1
F 0,1
K 0,1
L 0,1
N 0,1
O 0,1
D 1,0
E 1,0
G 1,0
H 1,0
I 1,0
J 1,0
M 1,0
A 1,1
ΠΡΩΤΗ ΟΜΑΔΑ
ΔΕΥΤΕΡΗ ΟΜΑΔΑ
ΤΡΙΤΗ ΟΜΑΔΑ

Παρούσα κατάσταση	Επόμενη κατάσταση, έξοδος Είσοδος = 0	Επόμενη κατάσταση, έξοδος Είσοδος = 1
A	K,1	B,1
B	C,0	D,1
C	D,0	O,1
D	G,1	A,0
E	J,1	A,0
F	M,0	K,1
G	G,1	L,0
H	H,1	F,0
I	I,1	N,0
J	J,1	C,0
K	L,0	M,1
L	D,0	K,1
M	I,1	A,0
N	E,0	B,1
O	F,0	E,1





Παρούσα κατάσταση	Επόμενη κατάσταση, έξοδος Είσοδος = 0	Επόμενη κατάσταση, έξοδος Είσοδος = 1
A	K,1	B,1
B	C,0	D,1
C	D,0	O,1
D	G,1	A,0
E	J,1	A,0
F	M,0	K,1
G	G,1	L,0
H	H,1	F,0
I	I,1	N,0
J	J,1	C,0
K	L,0	M,1
L	D,0	K,1
M	I,1	A,0
N	E,0	B,1
O	F,0	E,1


C
F
K
L
N
O
D
E
G
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I
J
M
A
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D-C
C-M
D-K
D-M
K-O
C-L
D-M
D-L
M-O
L-M
K-M
C-D
D-K
K-O
D-M
D-L
K-M
C-E
B-D
D-E
B-O
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B-M
D-E
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D-F
E-O
F-M
E-K
F-L
E-M
D-F
E-K
E-F
B-E
G-J
G-I
A-L
G-I
A-F
H-J
A-F
G-H
F-L
G-I
A-N
I-J
A-N
G-I
L-N
H-I
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G-J
A-C
A-C
G-J
C-L
H-J
C-F
I-J
C-N
G-I
I-J
G-I
A-L
H-I
A-F
I-J
A-N
I-J
A-N
A
M, E, D
J, I, G
O, K, B
N, L, F, C
B
C
F
K
L
N
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D
E
G
H
I
J
M