

S1	1-2 2-4													
S2	1-5 2-6	3-5 4-6												
S3	1-7 2-8	3-7 4-8	5-7 6-8											
S4	1-9 2-10	3-9 4-10	5-9 6-10	7-9 8-10										
S5	1-11 2-12	3-11 4-12	5-11 6-12	7-11 8-12	9-11 10-12									
S6	1-13 2-14	3-13 4-14	5-13 6-14	7-13 8-14	9-13 10-14	11-13 12-14								
S7	0-1 0-2	0-3 0-4	0-5 0-6	0-7 0-8	0-9 0-10	0-11 0-12	0-13 0-14							
S8	0-1 0-2	0-3 0-4	0-5 0-6	0-7 0-8	0-9 0-10	0-11 0-12	0-13 0-14	0-0 0-0						
S9	0-1 0-2	0-3 0-4	0-5 0-6	0-7 0-8	0-9 0-10	0-11 0-12	0-13 0-14	0-0 0-0	0-0 0-0					
S10	X	X	X	X	X	X	X	X	X	X				
S11	0-1 0-2	0-3 0-4	0-5 0-6	0-7 0-8	0-9 0-10	0-11 0-12	0-13 0-14	0-0 0-0	0-0 0-0	0-0 0-0	X			
S12	X	X	X	X	X	X	X	X	X	0-0 0-0	X			
S13	0-1 0-2	0-3 0-4	0-5 0-6	0-7 0-8	0-9 0-10	0-11 0-12	0-13 0-14	0-0 0-0	0-0 0-0	0-0 0-0	X	0-0 0-0	X	
S14	0-1 0-2	0-3 0-4	0-5 0-6	0-7 0-8	0-9 0-10	0-11 0-12	0-13 0-14	0-0 0-0	0-0 0-0	0-0 0-0	X	0-0 0-0	X	0-0 0-0
	S0	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13

100

52'

PS	N S		output	
	x=0	x=1	x=0	x=1
50	51	52	0	0
51	53'	54'	0	0
52	54'	53'	0	0
53'	57'	57'	0	0
54'	57'	510'	0	0
57'	50	50	0	0
510'	50	50	1	0

8.2

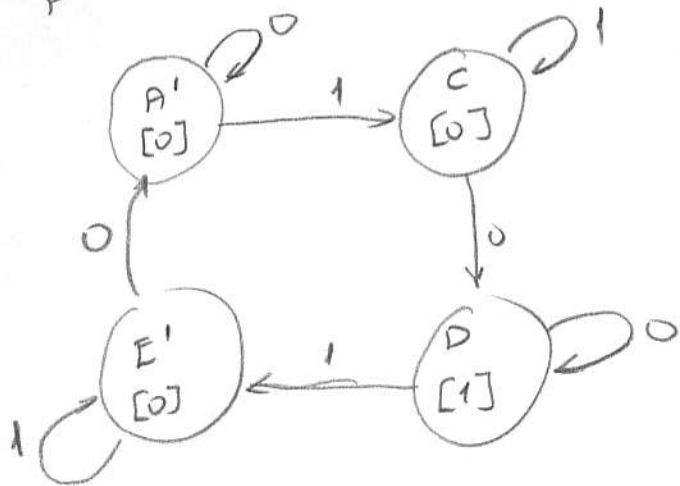
PS	NS		output
	x=0	x=1	
A	B	C	0
B	A	C	0
C	D	C	0
D	D	E	1
E	A	F	0
F	B	G	0
G	A	E	0

B	A-B C-C					
C	B-D C-C	A-B C-C				
D						
E	A-B C-F	A-A C-F	A-D C-F	A-C E-F		
F	B-B C-G	A-B C-G	B-D C-G	B-D E-G	A-B F-G	
G	A-B C-E	A-A C-E	A-D C-E	A-D E-E	A-A E-F	A-B G-E
	A	B	C	D	E	F

$A=B \rightarrow A'$
 $E=F$
 $E=G$
 $F=G$

$E=F=G \rightarrow E'$

PS	NS		output
	x=0	x=1	
A'	A'	C	0
C	D	C	0
D	D	E'	1
E'	A'	E'	0



8.3

[illegible]

$$3=6 \rightarrow 3'$$

$$4-5 \rightarrow 54'$$

$10 = 12$ $\gamma 510'$

15-16 → 3151

$$7 = 8$$

$$7=9 \qquad 9=11$$

$$7=11 \quad 8=13$$

$$7=13 \quad 8=14$$

$$7 = 14$$

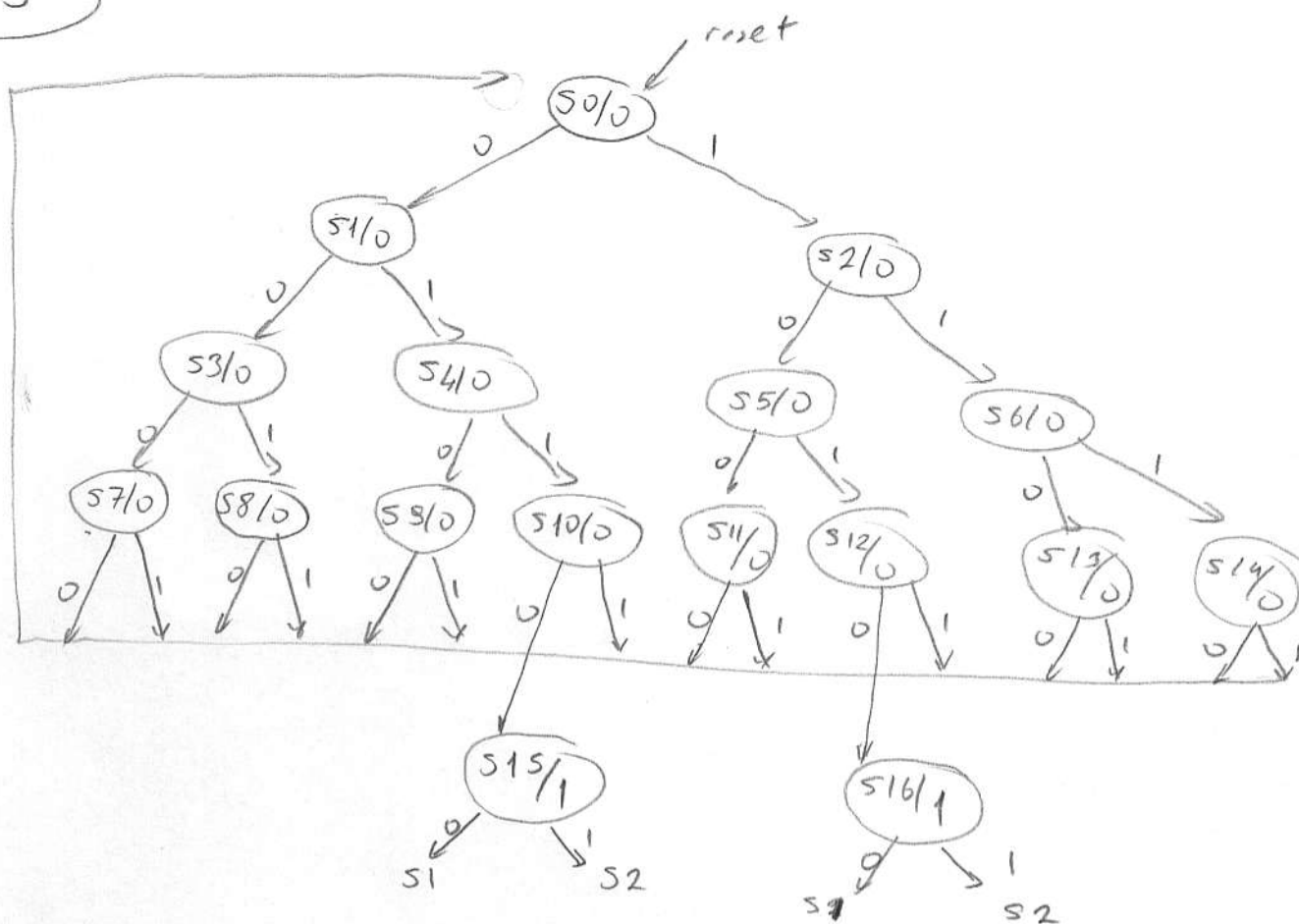
$$\begin{array}{l} 8-8 \\ 8-11 \end{array} \quad \begin{array}{l} 11-10 \\ 11-14 \end{array}$$

8-13 13-14

$8 = 14$

$7-8-9-11-13-14 \rightarrow 571$

8.3



P>	X>		Output
	X=0	X=1	
s0	s1	s2	0
s1	s3	s4	0
s2	s5	s6	0
s3	s7	s8	0
s4	s9	s10	0
s5	s11	s12	0
s6	s13	s14	0
s7	s0	s0	0
s8	s0	s0	0
s9	s0	s0	0
s10	s15	s0	0
s11	s0	s0	0
s12	s16	s0	0
s13	s0	s0	0
s14	s0	s0	0
s15	s1	s2	1
s16	s1	s2	1

Moore state diagram has
2 more states than Mealy
version.

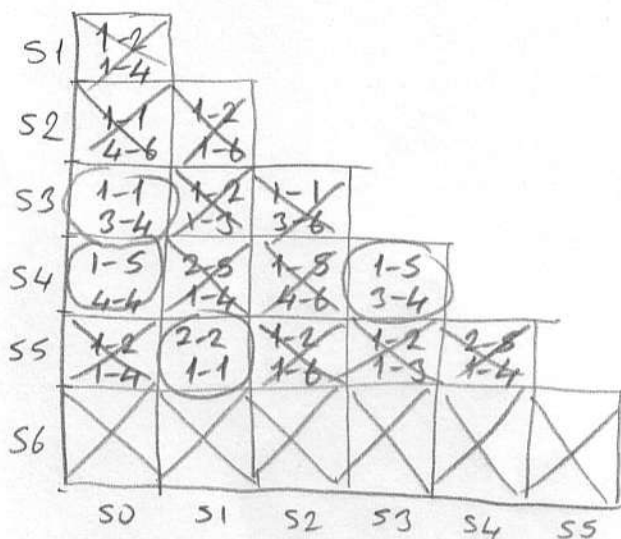
8.3

PS	N		output
	x=0	x=1	
S0	S11	S2	0
S1	S3'	S4'	0
S2	S4'	S3'	0
S3'	S7'	S7'	0
S4'	S7'	S10'	0
S7'	S0	S0	0
S10'	S15'	S0	0
S15'	S1	S2	1

Reduced Moore state diagram has 1 more state. Original 2 extra states are merged to 1 state and the rest is similar to Mealy version

8.4

PS	N S		out put	
	x=0	x=1	x=0	x=1
S0	S1	S4	0	0
S1	S2	S1	0	0
S2	S1	S6	0	0
S3	S1	S3	0	0
S4	S5	S4	0	0
S5	S2	S1	0	0
S6	S5	S3	0	1

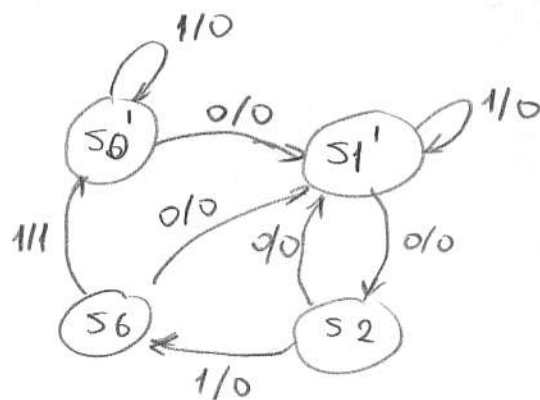


$S0=S3$
 $S0=S4$
 $S3=S4$

$S0=S3=S4 \rightarrow S0'$

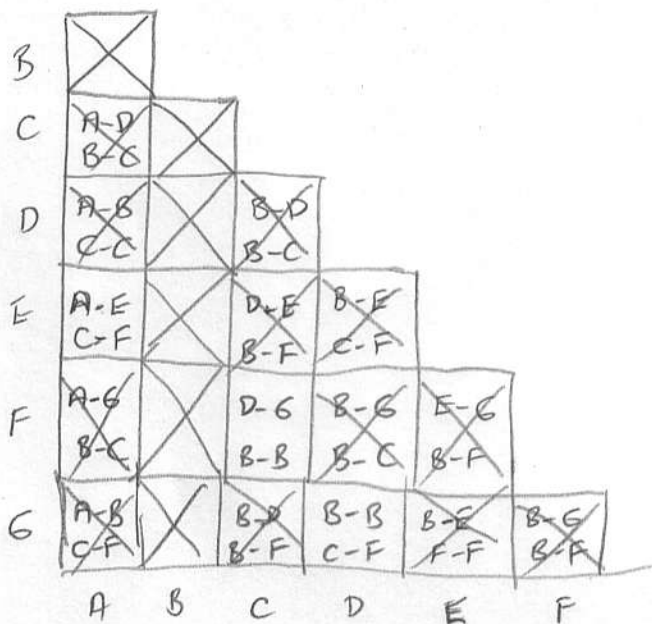
$S1=S5 \rightarrow S1'$

PS	N S		out put	
	x=0	x=1	x=0	x=1
S0'	S1'	S0'	0	0
S1'	S2	S1'	0	0
S2	S1'	S6	0	0
S6	S1'	S0'	0	1



8.5

PS	NS		output
	x=0	x=1	
A	A	C	0
B	D	B	1
C	D	B	0
D	B	C	0
E	E	F	0
F	G	B	0
G	B	F	0



$A = E \rightarrow A'$
 $C = F \rightarrow C'$
 $D = G \rightarrow D'$

PS	NS		output
	x=0	x=1	
A'	A'	C'	0
B	D'	B	1
C'	D'	B	0
D'	B	C'	0

