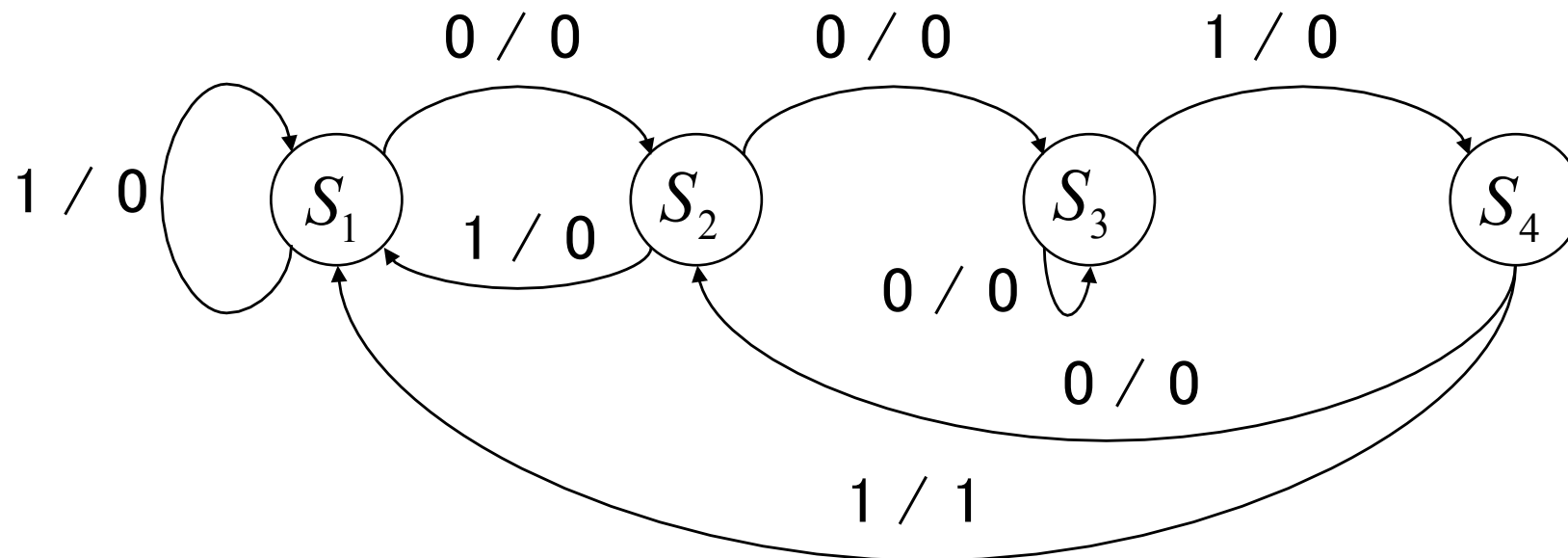
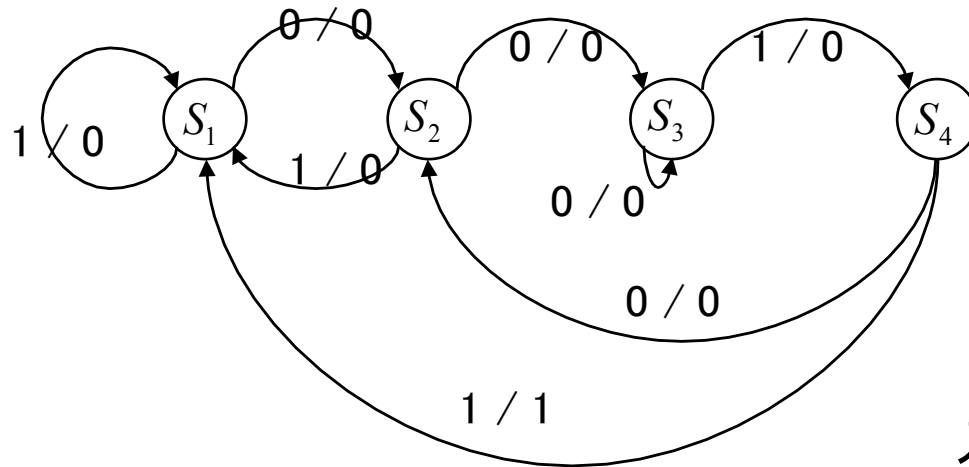


問題

- 入力系列”0011”に対してのみ1を出力する順序機械の順序回路を示せ



遷移表, 出力表



入力

	0	1
S1	S2	S1
S2	S3	S1
S3	S3	S4
S4	S2	S1

遷移表(次状態)

	0	1
S1	0	0
S2	0	0
S3	0	0
S4	0	1

出力表

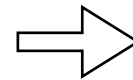
状態割り当て

$S_1 \rightarrow "00", S_2 \rightarrow "01", S_3 \rightarrow "10", S_4 \rightarrow "11"$

$S_p \rightarrow "y_1y_2"$

遷移表

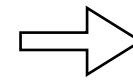
	0	1
S1	S2	S1
S2	S3	S1
S3	S3	S4
S4	S2	S1



$y_1y_2 \backslash x$	0	1
00	01	00
01	10	00
10	10	11
11	01	00

出力表

	0	1
S1	0	0
S2	0	0
S3	0	0
S4	0	1



$y_1y_2 \backslash x$	0	1
00	0	0
01	0	0
10	0	0
11	0	1

真理値表

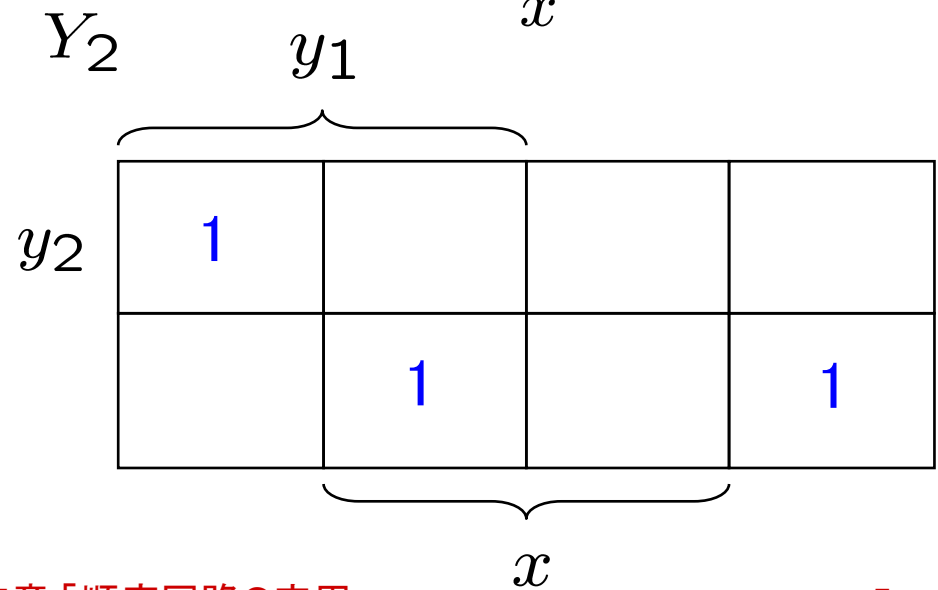
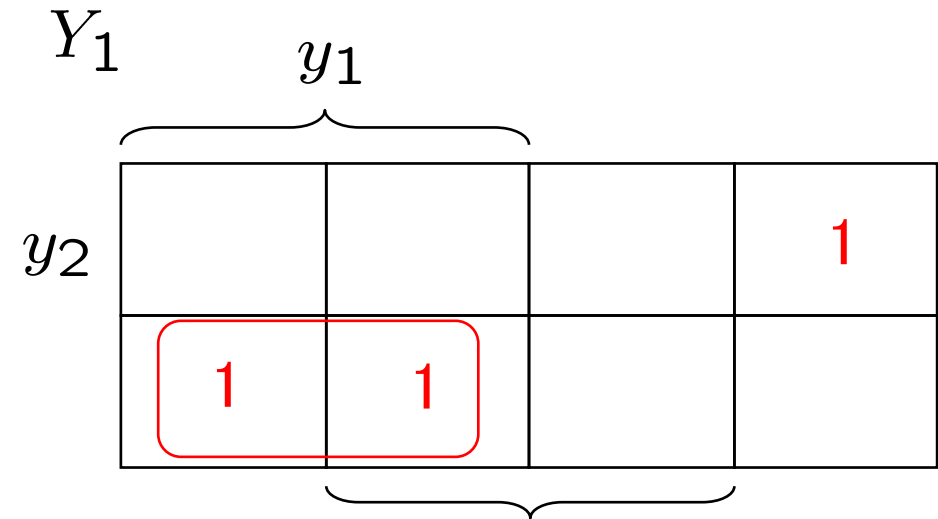
$y_1y_2 \backslash x$	0	1
00	01	00
01	10	00
10	10	11
11	01	00

$y_1y_2 \backslash x$	0	1
00	0	0
01	0	0
10	0	0
11	0	1

現状態		入力	次状態		出力
$y_1 \quad y_2$		x	Y_1	Y_2	z
0	0	0	0	1	0
0	0	1	0	0	0
0	1	0	1	0	0
0	1	1	0	0	0
1	0	0	1	0	0
1	0	1	1	1	0
1	1	0	0	1	0
1	1	1	0	0	1

簡単化

y_1	y_2	x	Y_1	Y_2	z
0	0	0	0	1	0
0	0	1	0	0	0
0	1	0	1	0	0
0	1	1	0	0	0
1	0	0	1	0	0
1	0	1	1	1	0
1	1	0	0	1	0
1	1	1	0	0	1



論理関数

Y_1

	y_1		
y_2			1
	1	1	

x

$$Y_1 = y_1 \bar{y}_2 + \bar{y}_1 y_2 \bar{x}$$

$$Y_2 = y_1 y_2 \bar{x} + y_1 \bar{y}_2 x + \bar{y}_1 \bar{y}_2 \bar{x}$$

$$z = y_1 y_2 x$$

Y_2

	y_1		
y_2	1		
		1	1

x

回路図

