

	$S_1$	$S_0$	$a$	$b$	$x$	$N_{s0}$	$N_{s1}$	
00	0	0	0	0	0	0	0	0
	0	0	0	1	0	0	1	1
	0	0	1	0	0	0	1	2
	0	0	1	1	0	0	0	3
01	0	1	0	0	0	0	0	4
	0	1	1	0	0	1	1	5
	0	1	1	1	0	1	0	6
10	1	0	0	0	1	1	0	7
	1	0	0	1	1	1	1	8
	1	0	1	0	1	0	0	9
	1	0	1	1	1	1	0	10
11	1	1	0	0	1	0	0	11
	1	1	0	1	1	1	1	12
	1	1	1	0	1	0	0	13
	1	1	1	1	1	1	1	14
	1	1	1	1	1	1	1	15

$$N_{s1} = s_1's_0ab' + s_1's_0ab + s_1s_0a'b' + s_1s_0a'b + s_1s_0ab + s_1s_0a'b' + s_1s_0ab$$

$N_{s1}$	$s_1s_0$	00	01	11	10
00		0	1	1	2
01				1	1
11			1	1	
10		1	1	1	

$$N_{s1} = s_1's_0a + s_1b + s_1s_0a'$$

$$N_{s0} = s_1's_0a'b' + s_1's_0ab' + s_1s_0a'b' + s_1s_0a'b + s_1s_0ab$$

$N_{s0}$	$s_1s_0$	00	01	11	10
00		0			1
01					1
11			1	1	
10		1	1	1	

$$N_{s0} = s_1'a'b' + s_1a'b' + s_1s_0b$$

$$= s_1'a'b' + s_1b(s_0 + a')$$

$x$	$s_1s_0$	00	01	11	10
00					
01					
11		1	1	1	1
10		1	1	1	1

$$x = s_1a' + s_1a$$

$$x = s_1(a' + a)$$

$$x = s_1$$