

FA

	$S_1$	$S_0$	$a$	$b$	$X$	$n_1$	$n_0$
$S_0$	0	0	0	0	0	0	0
	0	0	0	1	0	0	0
	0	0	1	0	0	0	1
	0	0	1	1	0	0	0
$S_1$	0	1	0	0	0	0	0
	0	1	0	1	0	0	0
	0	1	1	0	0	1	1
	0	1	1	1	0	1	0
$S_2$	1	0	0	0	1	1	0
	1	0	0	1	1	1	1
	1	0	1	0	1	0	0
	1	0	1	1	1	1	0
$S_3$	1	1	0	0	1	0	0
	1	1	0	1	1	1	1
	1	1	1	0	1	0	0
	1	1	1	1	1	1	1

$$X = S_1 S_0' + S_1 S_0$$

$S_1 S_0$	$ab$	00	01	11	10
00					
01					
11		1	1	1	1
10		1	1	1	1

$$X = S_1 S_0 a' b' + S_1 S_0' a' b + S_1 S_0' a b' + S_1 S_0' a b + S_1 S_0 a' b' + S_1 S_0 a' b + S_1 S_0 a b' + S_1 S_0 a b$$

$$n_1 = S_1' S_0 a b' + S_1' S_0 a b + S_1 S_0' a' b' + S_1 S_0' a' b + S_1 S_0 a' b + S_1 S_0 a b$$

$$n_0 = S_1' S_0' a b' + S_1' S_0 a b' + S_1 S_0' a' b + S_1 S_0 a' b + S_1 S_0 a b$$

$n_1$

$S_1 S_0$	$ab$	00	01	11	10
00					
01				1	1
11			1	1	
10		1	1		

$$n_1 = S_1' S_0 a + S_1 b + S_1 S_0' a'$$

$n_0$

$S_1 S_0$	$ab$	00	01	11	10
00					1
01					1
11			1	1	
10			1		

$$n_0 = S_1' a b' + S_1 S_0 b + S_1 a' b$$

$$n_0 = S_1' a b' + S_1 b (S_0 + a')$$