

$q_1[1] q_1[0]$	100	01	11	10
0	0	1	0	1
1	1	0	1	0

$$q_0[0] = (!q_1[1] q_1[0]) + (q_1[1] q_1[0]) + (q_1[1] q_1[0]) + (!q_1[1] !q_1[0])$$

$q_0[1] =$

100	01	11	10
0	(1)	0	(1) (1)
1	(1)	0	0 0

$$q_0[1] = (!q_1[1] !q_1[0]) + (!q_1[1])$$

$$q_0[0] = (q_1[1]) \oplus (q_1[0]) \quad (\text{from wolfram alpha})$$

