



q_3	q_2	q_1	q_0	Dec	A	B	C	D	q_3^+	q_2^+	q_1^+	q_0^+	Dec
0	0	0	0	0					0	0	0	0	1
0	0	0	1	1					0	0	0	1	2
0	0	1	0	2					0	0	1	0	3
0	0	1	1	3		1			0	1	1	1	7
0	1	0	0	4					0	1	0	0	5
0	1	0	1	5					0	1	0	1	6
0	1	1	0	6					0	1	1	0	4
0	1	1	1	7	1	1	1	1	1	0	0	0	8
1	0	0	0	8					1	0	0	1	9
1	0	0	1	9					1	0	1	0	10
1	0	1	0	10					1	0	0	0	8
1	0	1	1	11	1				0	0	0	1	1
1	1	0	0	12	1	1			0	0	0	1	1
1	1	0	1	13					1	1	1	0	14
1	1	1	0	14	1	1			1	0	1	1	11
1	1	1	1	15	1	1	1	1	0	0	0	1	1

$$A = q_3 q_2 \bar{q}_1 \bar{q}_0 + q_2 q_1 q_0 + q_3 q_1 q_0$$

$$B = q_3 q_2 \bar{q}_0 + q_3 q_2 q_1 + \bar{q}_3 q_1 q_0$$

$$C = \bar{q}_1 q_0 + q_2 q_0 + q_3 q_0 + \bar{q}_3 q_2 q_1 + q_3 \bar{q}_2 q_1$$

$$D = \bar{q}_1 + (q_2 \oplus q_0)(\bar{q}_3 q_1) + q_3 q_2 q_1 \bar{q}_0$$

$$\begin{aligned} & \bar{q}_1 + (q_2 \oplus q_0)(\bar{q}_3 q_1) + q_3 q_2 q_1 \bar{q}_0 \\ & \bar{q}_1 + (q_2 \oplus q_0)(\bar{q}_3 q_1) + q_3 q_2 q_1 \bar{q}_0 \end{aligned}$$

$$\begin{aligned} & 0111 \\ & 0010 \end{aligned}$$

q_3	q_2	q_1	q_0	Dec	A	B	C	D	q_3^+	q_2^+	q_1^+	q_0^+	Dec
0	0	0	0	0	0	0	0	0	0	0	0	0	1
0	0	0	1	1	0	0	1	1	0	0	1	0	2
0	0	1	0	2	0	0	0	1	0	0	1	1	3
0	0	1	1	3	0	1	0	0	0	1	1	1	7
0	1	0	0	4	0	0	0	1	0	1	0	1	5
0	1	0	1	5	0	0	1	1	0	1	1	0	6
0	1	1	0	6	0	0	1	0	0	1	0	0	4
0	1	1	1	7	1	1	1	1	1	0	0	0	8
1	0	0	0	8	0	0	0	1	1	0	0	1	9
1	0	0	1	9	0	0	1	1	1	0	1	0	10
1	0	1	0	10	0	0	1	0	1	0	0	0	8
1	0	1	1	11	1	0	1	0	0	0	0	1	1
1	1	0	0	12	1	1	0	1	0	0	0	1	1
1	1	0	1	13	0	0	1	1	1	1	1	0	14
1	1	1	0	14	0	1	0	1	1	0	1	1	11
1	1	1	1	15	1	1	1	0	0	0	0	1	1

