

Case	I0	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11	I12	I13	I14	I15	S	Y
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0000"	0
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0000"	1
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0001"	0
2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0001"	1
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0010"	0
3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0010"	1
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0011"	0
4	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0 "0011"	1
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0100"	0
5	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0 "0100"	1
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0101"	0
6	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0 "0101"	1
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0101"	0
7	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0 "0110"	1
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "0110"	0
8	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0 "0111"	1
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "1000"	0
9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0 "1000"	1
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "1001"	0
10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0 "1001"	1
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "1010"	0
11	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0 "1010"	1
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "1011"	0
12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0 "1011"	1
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "1100"	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0 "1100"	1
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "1101"	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0 "1101"	1
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "1110"	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0 "1110"	1
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 "1111"	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1 "1111"	1

The propagation delay for this circuit and it's 32 bit equivalent is 21 ns