

TABLE 3.11 Resulting 3N code words for 4-bit information words

Original information	3N code word
0000	000000
0001	000011
0010	000110
0011	001001
0100	001100
0101	001111
0110	010010
0111	010101
1000	011000
1001	011011
1010	011110
1011	100001
1100	100100
1101	100111
1110	101010
1111	101101

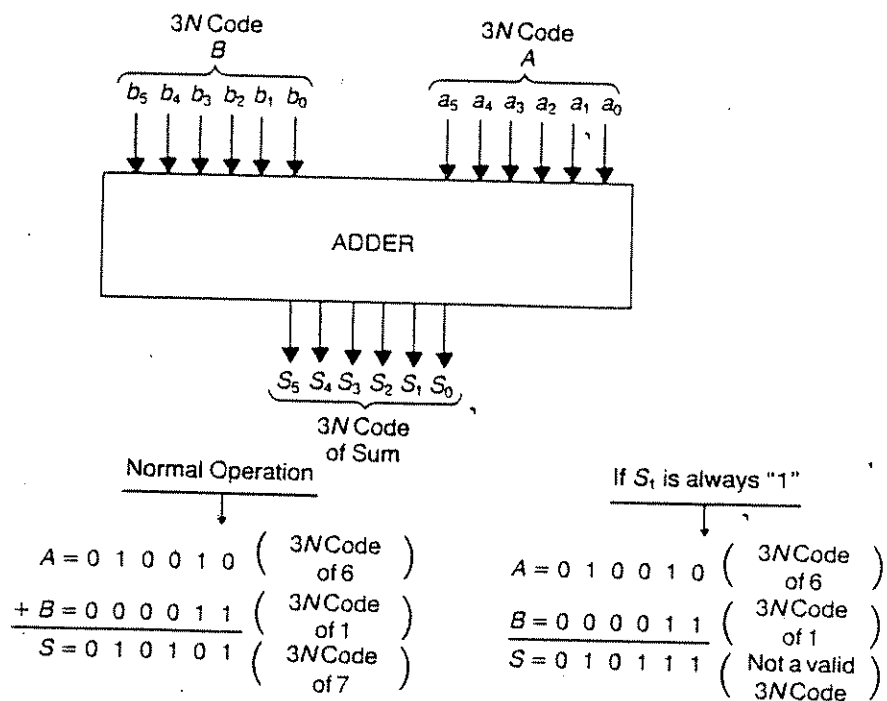


Fig. 3.47 Illustration of the error detection capabilities of the 3N arithmetic code. The presence of the fault results in the sum being an invalid 3N code.

TABLE 3.12 Residue code words for 4-bit information words using a modulus of three

Information	Residue	Code word
0000	0	0000 00
0001	1	0001 01
0010	2	0010 10
0011	0	0011 00
0100	1	0100 01
0101	2	0101 10
0110	0	0110 00
0111	1	0111 01
1000	2	1000 10
1001	0	1001 00
1010	1	1010 01
1011	2	1011 10
1100	0	1100 00
1101	1	1101 01
1110	2	1110 10
1111	0	1111 00

TABLE 3.13 Inverse-residue code words for 4-bit information words using a modulus of three

Information	Residue	Inverse residue	Code
0000	0	3	0000 11
0001	1	2	0001 10
0010	2	1	0010 01
0011	0	3	0011 11
0100	1	2	0100 10
0101	2	1	0101 01
0110	0	3	0110 11
0111	1	2	0111 10
1000	2	1	1000 01
1001	0	3	1001 11
1010	1	2	1010 10
1011	2	1	1011 01
1100	0	3	1100 11
1101	1	2	1101 10
1110	2	1	1110 01
1111	0	3	1111 11