

Subtractors

20 September 2023

11:43

Half Subtractor

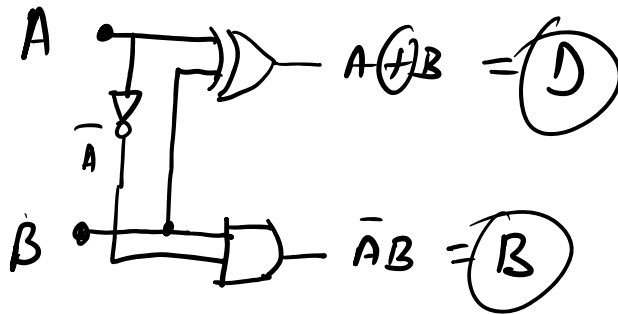
	A	B	D	B
0	0	0	0	0
1	0	1	1	1
2	1	0	1	0
3	1	1	0	0

A \ B	0	1
0	0	1
1	1	0

$$D = A \oplus B$$

A \ B	0	1
0	0	0
1	0	1

$$B = \bar{A}B$$



Full Subtractor

	A	B	C	D	B
0	0	0	0	0	0
1	0	0	1	1	1
2	0	1	0	1	1
3	0	1	1	0	1
4	1	0	0	1	0
5	1	0	1	0	0
6	1	1	0	0	0
7	1	1	1	1	1

A \ BC	00	01	10	11
0	0	1	0	1
1	1	0	1	0

$$D = A \oplus B \oplus C$$

A \ BC	00	01	10	11
0	0	1	0	1
1	1	0	1	0

- ① → A̅C
- ② → A̅B
- ③ → BC

$$B = \bar{A}B + BC + \bar{A}C$$