

01100111 01101111 00100000 01100111 01100101 01110100 00100000 01100001 00100000
01101100 01101001 01100110 01100101

اشياء سحت عليها وانت تذاكر و1% بيحي منها
By Riyadh :)

MINTERM, MAXTERM:

Maxterm is the sum of zeros

Minterm is the product of ones

- Each maxterm is *false* for exactly one combination of inputs.

Row number	x_1	x_2	x_3	Minterm	Maxterm
0	0	0	0	$m_0 = \bar{x}_1 \bar{x}_2 \bar{x}_3$	$M_0 = x_1 + x_2 + x_3$
1	0	0	1	$m_1 = \bar{x}_1 \bar{x}_2 x_3$	$M_1 = x_1 + x_2 + \bar{x}_3$
2	0	1	0	$m_2 = \bar{x}_1 x_2 \bar{x}_3$	$M_2 = x_1 + \bar{x}_2 + x_3$
3	0	1	1	$m_3 = \bar{x}_1 x_2 x_3$	$M_3 = x_1 + \bar{x}_2 + \bar{x}_3$
4	1	0	0	$m_4 = x_1 \bar{x}_2 \bar{x}_3$	$M_4 = \bar{x}_1 + x_2 + x_3$
5	1	0	1	$m_5 = x_1 \bar{x}_2 x_3$	$M_5 = \bar{x}_1 + x_2 + \bar{x}_3$
6	1	1	0	$m_6 = x_1 x_2 \bar{x}_3$	$M_6 = \bar{x}_1 + \bar{x}_2 + x_3$
7	1	1	1	$m_7 = x_1 x_2 x_3$	$M_7 = \bar{x}_1 + \bar{x}_2 + \bar{x}_3$

MSP : minimal sum of products (simplify the equation) ALSO
BEEN A SOP

Valid Example:

$$X'Y' + YZ + X'Y = X + YZ$$

Invalid Example:

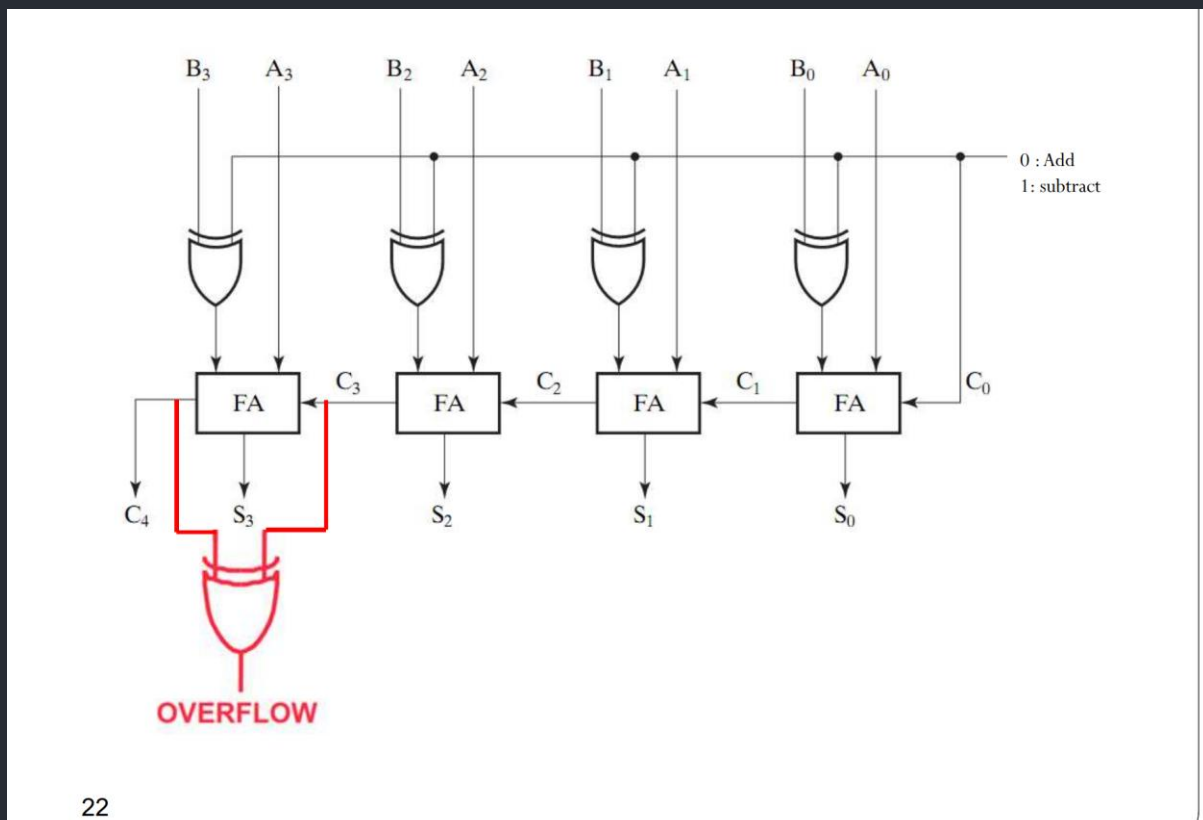
$$XY + XZ = X(Y + Z) \text{ // NOT A MSP!}$$

01100111 01101111 00100000 01100111 01100101 01110100 00100000 01100001 00100000
01101100 01101001 01100110 01100101

01100111 01101111 00100000 01100111 01100101 01110100 00100000 01100001 00100000
01101100 01101001 01100110 01100101

Design an Adder for 1-bit numbers: It's the same as Half adder , but different name

OVERFLOW : if you want to make an adder, but you want to deal with 2's complements , you need overflow to detect,



01100111 01101111 00100000 01100111 01100101 01110100 00100000 01100001 00100000
01101100 01101001 01100110 01100101