

Guia 8

1

Inputs Outputs

Cim	A	B	Cout	S
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	1	1	1	0
1	0	0	0	1
1	0	1	1	0
1	1	0	1	0
1	1	1	1	1

Cout

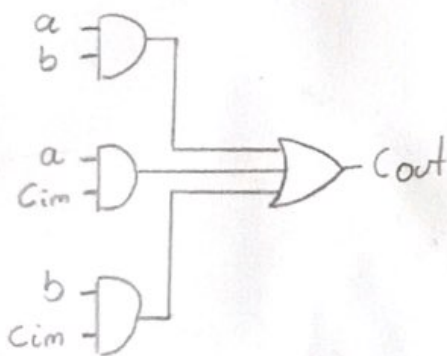
AB \ Cim	00	01	11	10
0	0	0	1	0
1	0	1	1	1

$$C_{out} = AB + C_{im}B + C_{im}A$$

S

AB \ Cim	00	01	11	10
0	0	1	0	1
1	1	0	1	0

$$\begin{aligned}
 S &= (\overline{C_{im}} \times \overline{A}B) + (\overline{C_{im}} \times A\overline{B}) + (C_{im} \times \overline{A} \times \overline{B}) + (C_{im} \times A \times 1) \\
 &= \overline{C_{im}} (\overline{A}B + A\overline{B}) + C_{im} (\overline{A}\overline{B} + AB) = \\
 &= \overline{C_{im}} (A \oplus B) + C_{im} (\overline{A \oplus B}) = \\
 &= C_{im} \oplus (A \oplus B)
 \end{aligned}$$



2

ADD_H = 1 \rightarrow Subtrac

ADD_H = 0 \rightarrow Adici6n

$$X \oplus 0 = X$$

$$X \oplus 1 = \overline{X}$$

