

Tabla01POS

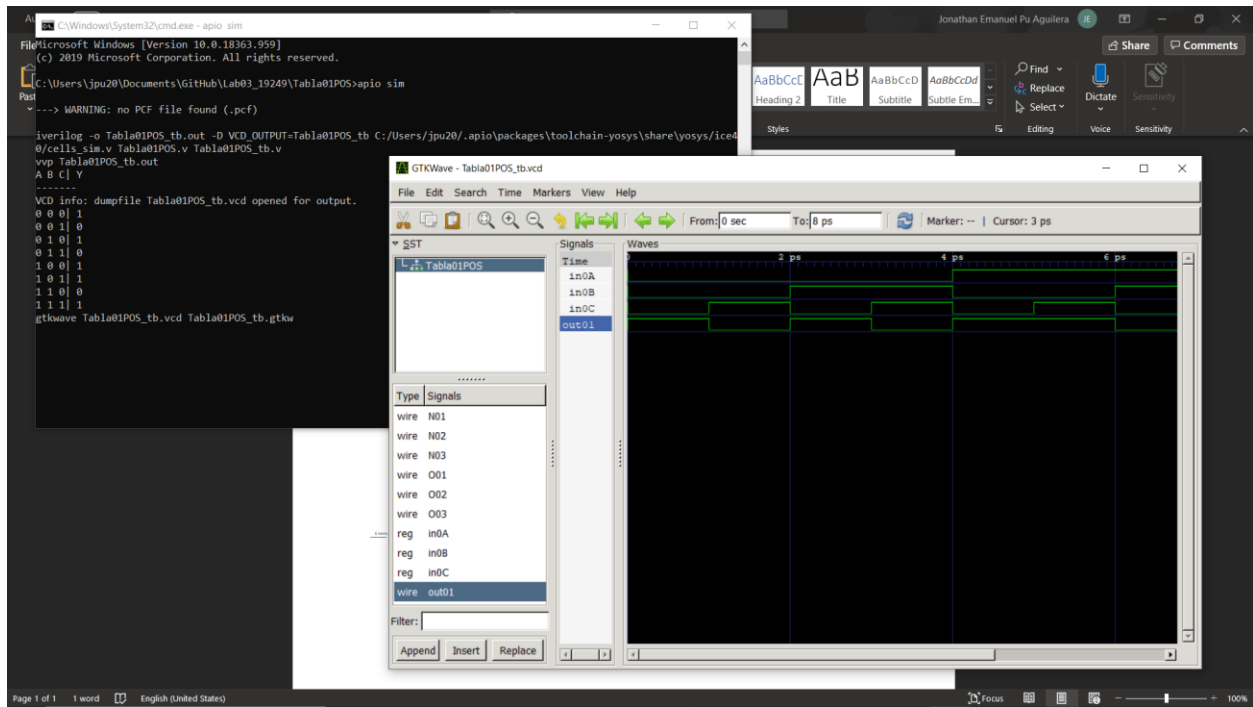


Tabla01SOP

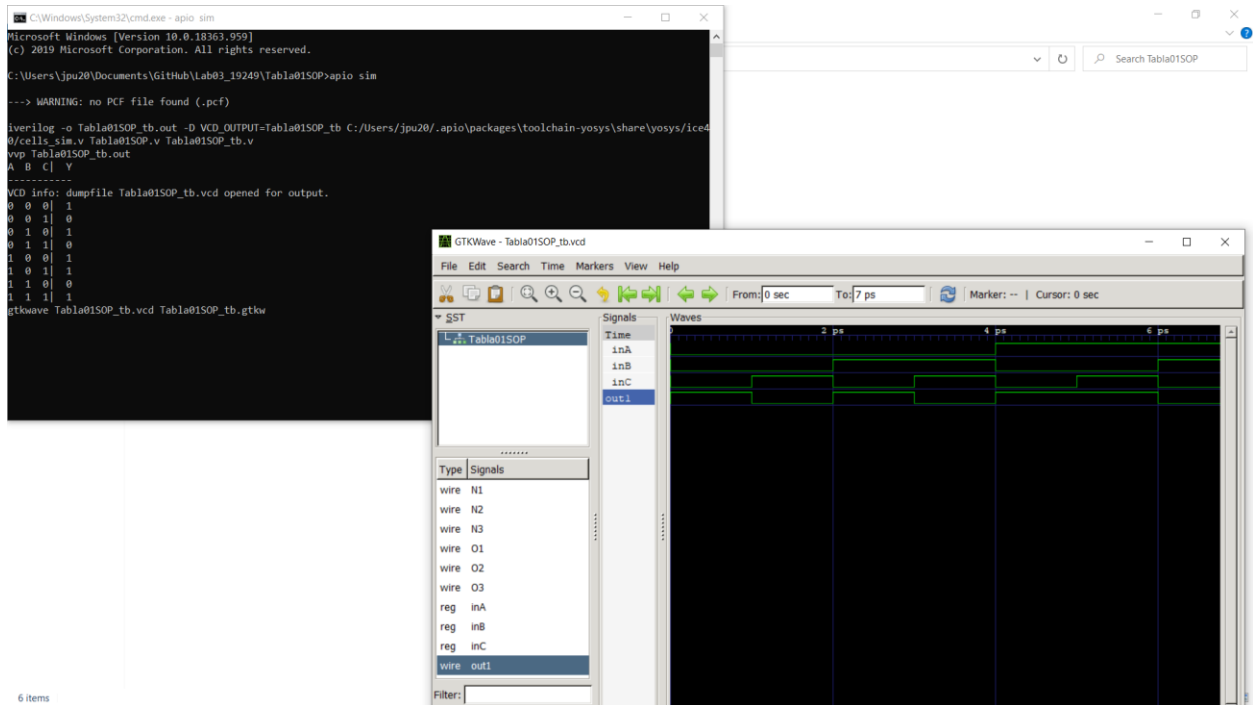


Tabla02POS

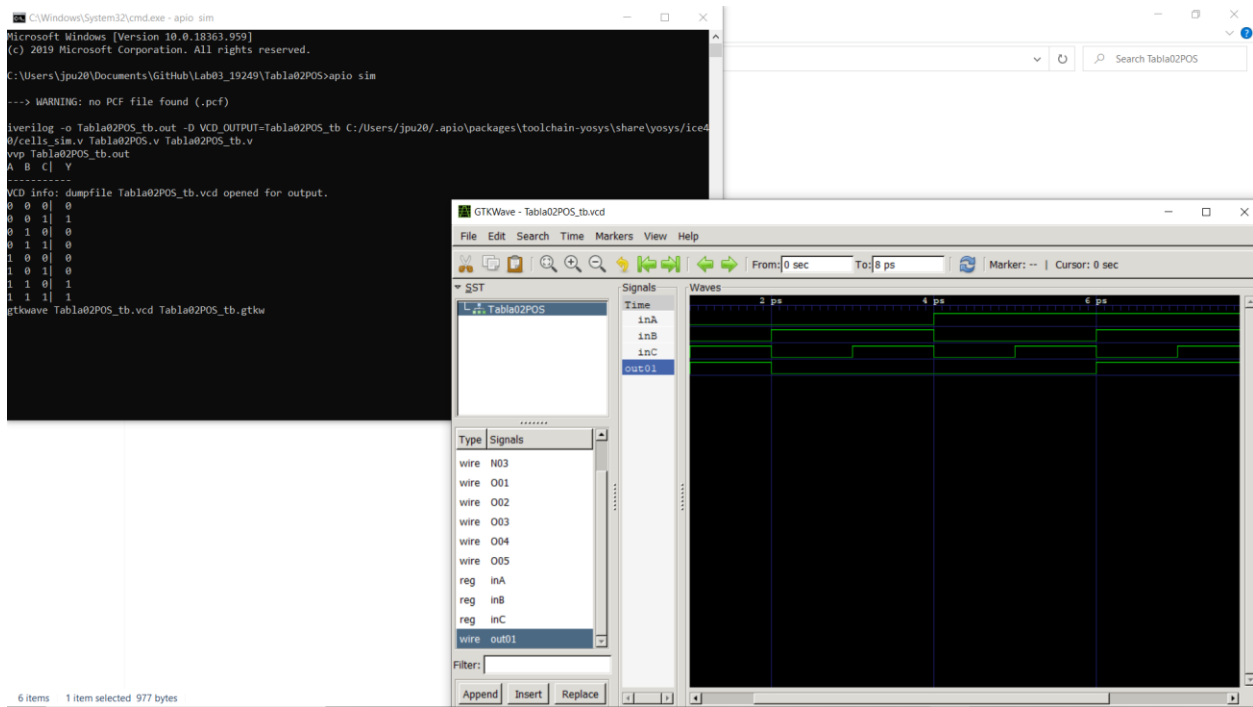


Tabla02SOP

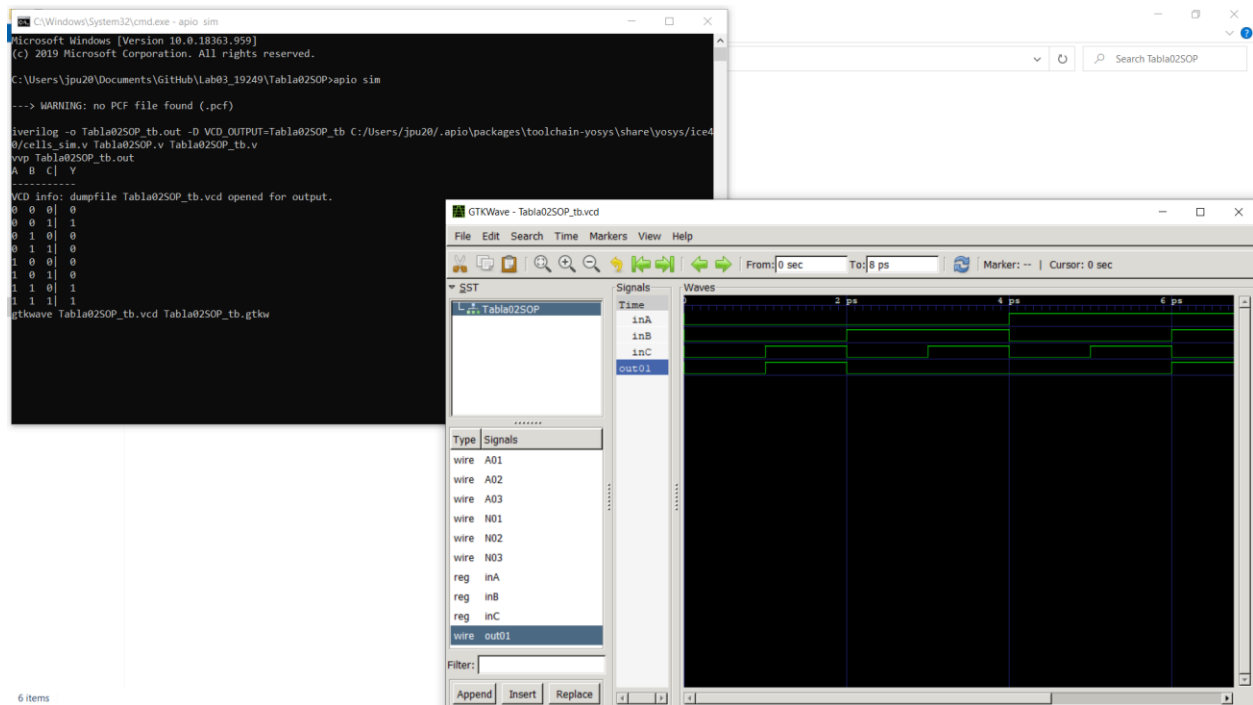


Tabla03POS

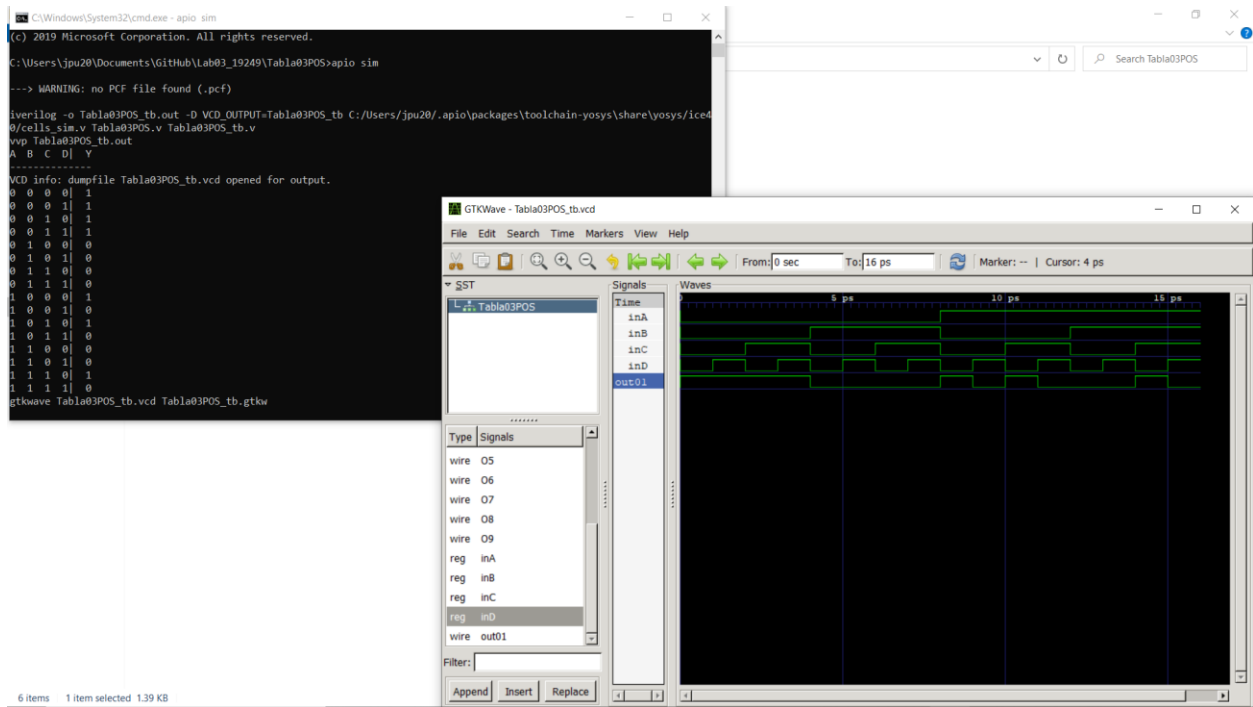


Tabla03SOP

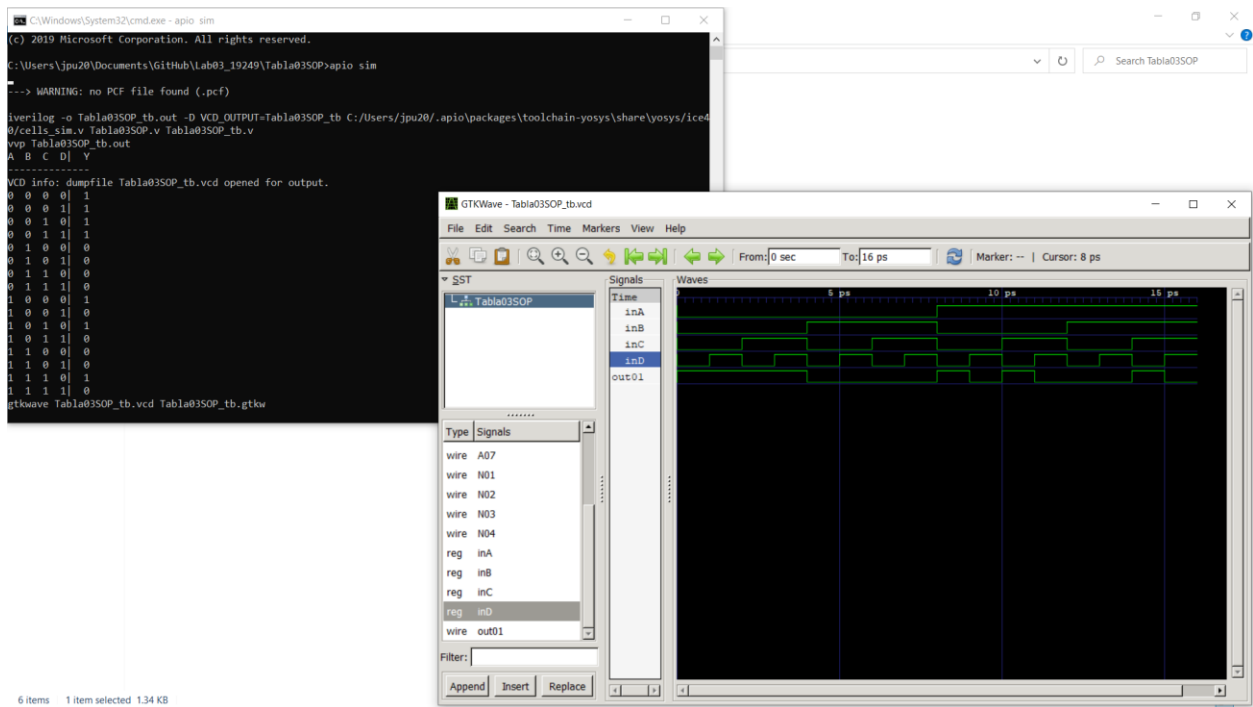


Tabla04POS

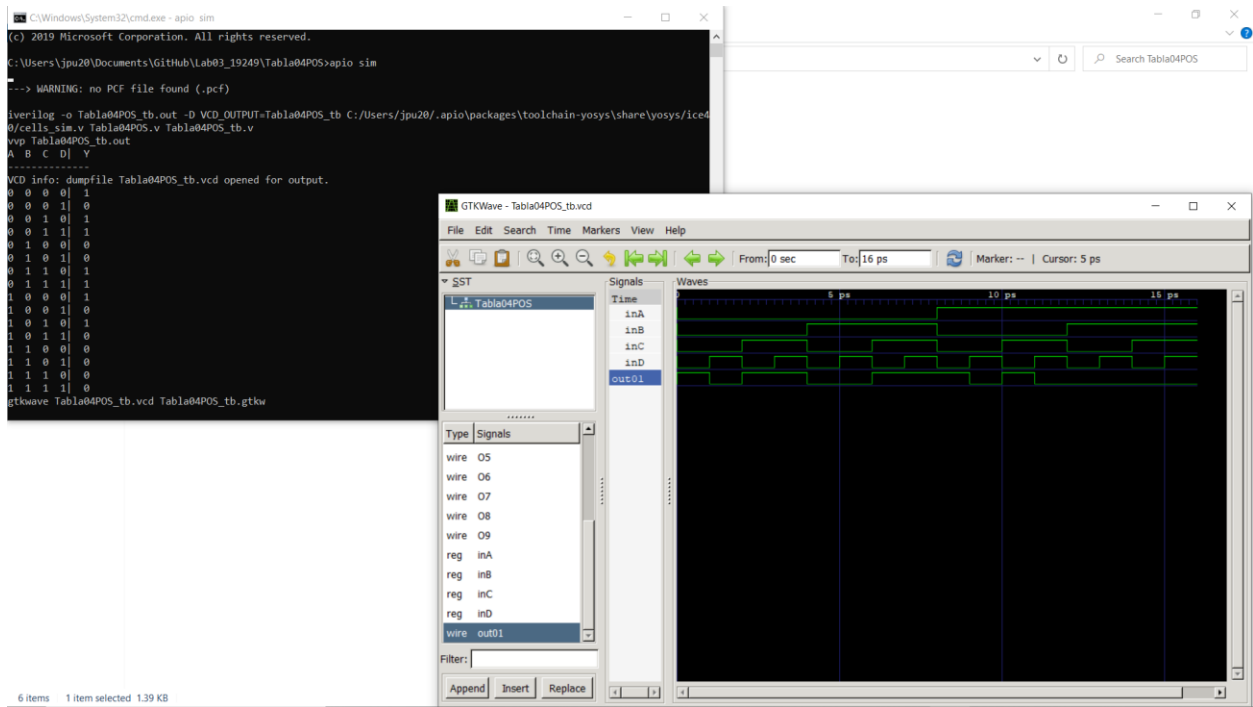
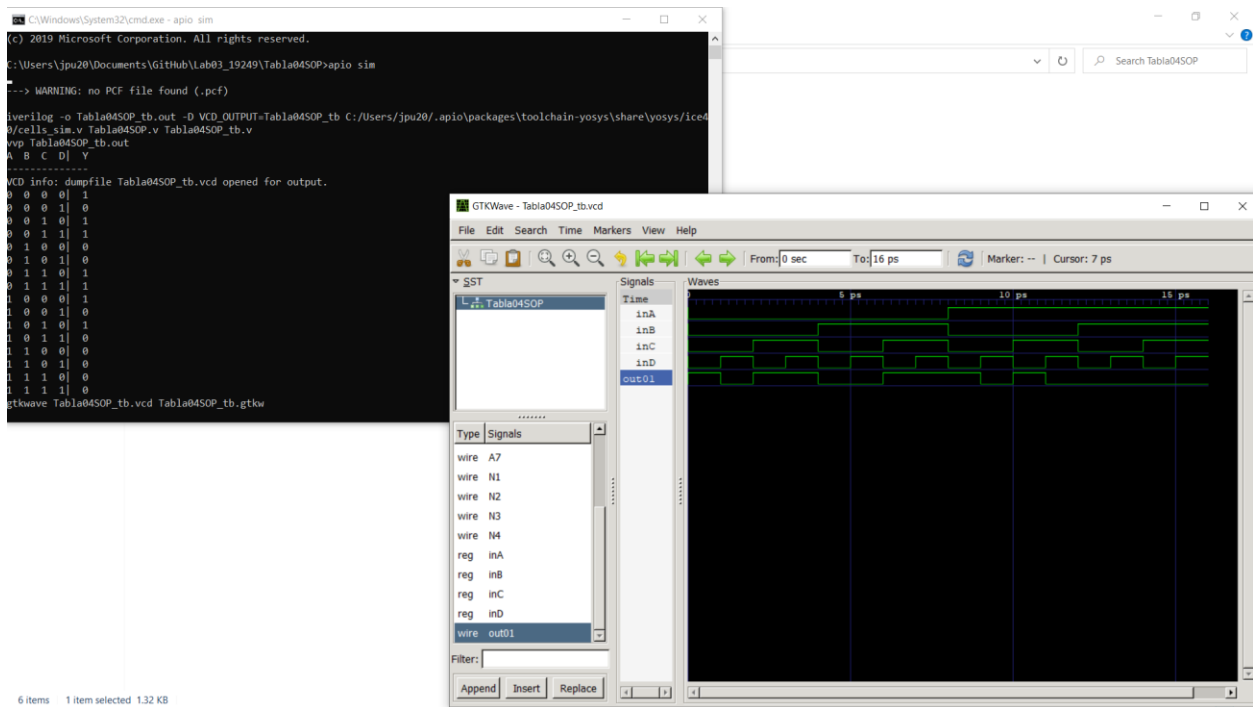


Tabla04SOP



Jonathan Emanuel Pu Aguilera
Carné 19249

Fecha entrega: 01.08.2020.
Sección lab. 11

Lab 03

Ejercicio 01.

Tabla 1

A	B	C	Y	miniterm	miniterm name	maxterm	maxterm name
0	0	0	1	$\bar{A} \cdot \bar{B} \cdot \bar{C}$	m_0	$A+B+C$	M_0
0	0	1	0	$\bar{A} \cdot \bar{B} \cdot C$	m_1	$A+B+\bar{C}$	M_1
0	1	0	1	$\bar{A} \cdot B \cdot \bar{C}$	m_2	$A+\bar{B}+C$	M_2
0	1	1	0	$\bar{A} \cdot B \cdot C$	m_3	$A+\bar{B}+\bar{C}$	M_3
1	0	0	1	$A \cdot \bar{B} \cdot \bar{C}$	m_4	$\bar{A}+B+C$	M_4
1	0	1	1	$A \cdot \bar{B} \cdot C$	m_5	$\bar{A}+B+\bar{C}$	M_5
1	1	0	0	$A \cdot B \cdot \bar{C}$	m_6	$\bar{A}+\bar{B}+C$	M_6
1	1	1	1	$A \cdot B \cdot C$	m_7	$\bar{A}+\bar{B}+\bar{C}$	M_7

Suma-de-productos SOP

$$Y = m_0 + m_2 + m_4 + m_5 + m_7$$

$$Y = \bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot \bar{C} + A \cdot \bar{B} \cdot \bar{C} + A \cdot \bar{B} \cdot C + A \cdot B \cdot C$$

Producto-de-sumas POS

$$Y = M_1 \cdot M_3 \cdot M_6$$

$$Y = (A+B+\bar{C}) \cdot (\bar{A}+\bar{B}+\bar{C}) \cdot (\bar{A}+\bar{B}+C)$$

Tabla 2

A	B	C	Y	miniterm	miniterm name	maxterm	maxterm name
0	0	0	0	$\bar{A} \cdot \bar{B} \cdot \bar{C}$	m_0	$A+B+C$	M_0
0	0	1	1	$\bar{A} \cdot \bar{B} \cdot C$	m_1	$A+B+\bar{C}$	M_1
0	1	0	0	$\bar{A} \cdot B \cdot \bar{C}$	m_2	$A+\bar{B}+C$	M_2
0	1	1	0	$\bar{A} \cdot B \cdot C$	m_3	$A+\bar{B}+\bar{C}$	M_3
1	0	0	0	$A \cdot \bar{B} \cdot \bar{C}$	m_4	$\bar{A}+B+C$	M_4
1	0	1	0	$A \cdot \bar{B} \cdot C$	m_5	$\bar{A}+B+\bar{C}$	M_5
1	1	0	1	$A \cdot B \cdot \bar{C}$	m_6	$\bar{A}+\bar{B}+C$	M_6
1	1	1	1	$A \cdot B \cdot C$	m_7	$\bar{A}+\bar{B}+\bar{C}$	M_7

SOP

$$Y = m_1 + m_6 + m_7$$

$$Y = \bar{A} \cdot \bar{B} \cdot C + A \cdot B \cdot \bar{C} + A \cdot B \cdot C$$

POS

$$Y = M_0 \cdot M_2 \cdot M_3 \cdot M_4 \cdot M_5$$

$$Y = (A+B+C) \cdot (A+\bar{B}+C) \cdot (A+\bar{B}+\bar{C}) \cdot (\bar{A}+B+C) \cdot (\bar{A}+B+\bar{C})$$

Tabla 3

A	B	C	D	Y	minterm	minterm name	Maxterm M	maxterm name
0	0	0	0	1	$\bar{A}\bar{B}\bar{C}\bar{D}$	m_0	$A+B+C+D$	M_0
0	0	0	1	1	$\bar{A}\bar{B}\bar{C}D$	m_1	$A+B+C+\bar{D}$	M_1
0	0	1	0	1	$\bar{A}\bar{B}C\bar{D}$	m_2	$A+B+\bar{C}+D$	M_2
0	0	1	1	1	$\bar{A}\bar{B}CD$	m_3	$A+B+\bar{C}+\bar{D}$	M_3
0	1	0	0	0	$\bar{A}B\bar{C}\bar{D}$	m_4	$A+\bar{B}+C+D$	M_4
0	1	0	1	0	$\bar{A}B\bar{C}D$	m_5	$A+\bar{B}+C+\bar{D}$	M_5
0	1	1	0	0	$\bar{A}BC\bar{D}$	m_6	$A+\bar{B}+\bar{C}+D$	M_6
0	1	1	1	0	$\bar{A}BCD$	m_7	$A+\bar{B}+\bar{C}+\bar{D}$	M_7
1	0	0	0	1	$A\bar{B}\bar{C}\bar{D}$	m_8	$\bar{A}+B+C+D$	M_8
1	0	0	1	0	$A\bar{B}\bar{C}D$	m_9	$\bar{A}+B+C+\bar{D}$	M_9
1	0	1	0	1	$A\bar{B}C\bar{D}$	m_{10}	$\bar{A}+B+\bar{C}+D$	M_{10}
1	0	1	1	0	$A\bar{B}CD$	m_{11}	$\bar{A}+B+\bar{C}+\bar{D}$	M_{11}
1	1	0	0	0	$AB\bar{C}\bar{D}$	m_{12}	$\bar{A}+\bar{B}+C+D$	M_{12}
1	1	0	1	0	$AB\bar{C}D$	m_{13}	$\bar{A}+\bar{B}+C+\bar{D}$	M_{13}
1	1	1	0	1	$ABC\bar{D}$	m_{14}	$\bar{A}+\bar{B}+\bar{C}+D$	M_{14}
1	1	1	1	0	$ABCD$	m_{15}	$\bar{A}+\bar{B}+\bar{C}+\bar{D}$	M_{15}

Suma-de-productos SOP

$$Y = m_0 + m_1 + m_2 + m_3 + m_8 + m_{10} + m_{14}$$

$$Y = (\bar{A}\bar{B}\bar{C}\bar{D}) + (\bar{A}\bar{B}\bar{C}D) + (\bar{A}\bar{B}C\bar{D}) + (\bar{A}\bar{B}CD) + (A\bar{B}\bar{C}\bar{D}) + (A\bar{B}C\bar{D}) + (ABC\bar{D})$$

Producto-de-sumas POS

$$Y = M_4 \cdot M_5 \cdot M_6 \cdot M_7 \cdot M_9 \cdot M_{11} \cdot M_{12} \cdot M_{13} \cdot M_{15}$$

$$Y = (A+\bar{B}+C+D) \cdot (A+\bar{B}+C+\bar{D}) \cdot (A+\bar{B}+\bar{C}+D) \cdot (A+\bar{B}+\bar{C}+\bar{D}) \cdot (\bar{A}+B+C+D) \cdot (\bar{A}+B+C+\bar{D}) \cdot (\bar{A}+B+\bar{C}+D) \cdot (\bar{A}+B+\bar{C}+\bar{D}) \cdot (\bar{A}+\bar{B}+\bar{C}+\bar{D})$$

Tabla 4

A	B	C	D	Y	minterm	minterm name	maxterm	maxterm name
0	0	0	0	1	$\bar{A} \cdot \bar{B} \cdot \bar{C} \cdot \bar{D}$	m_0	$A+B+C+D$	M_0
0	0	0	1	0	$\bar{A} \cdot \bar{B} \cdot \bar{C} \cdot D$	m_1	$A+B+C+\bar{D}$	M_1
0	0	1	0	1	$\bar{A} \cdot \bar{B} \cdot C \cdot \bar{D}$	m_2	$A+B+\bar{C}+D$	M_2
0	0	1	1	1	$\bar{A} \cdot \bar{B} \cdot C \cdot D$	m_3	$A+B+\bar{C}+\bar{D}$	M_3
0	1	0	0	0	$\bar{A} \cdot B \cdot \bar{C} \cdot \bar{D}$	m_4	$A+\bar{B}+C+D$	M_4
0	1	0	1	0	$\bar{A} \cdot B \cdot \bar{C} \cdot D$	m_5	$A+\bar{B}+C+\bar{D}$	M_5
0	1	1	0	1	$\bar{A} \cdot B \cdot C \cdot \bar{D}$	m_6	$A+\bar{B}+\bar{C}+D$	M_6
0	1	1	1	1	$\bar{A} \cdot B \cdot C \cdot D$	m_7	$A+\bar{B}+\bar{C}+\bar{D}$	M_7
1	0	0	0	1	$A \cdot \bar{B} \cdot \bar{C} \cdot \bar{D}$	m_8	$\bar{A}+B+C+D$	M_8
1	0	0	1	0	$A \cdot \bar{B} \cdot \bar{C} \cdot D$	m_9	$\bar{A}+B+C+\bar{D}$	M_9
1	0	1	0	1	$A \cdot \bar{B} \cdot C \cdot \bar{D}$	m_{10}	$\bar{A}+B+\bar{C}+D$	M_{10}
1	0	1	1	0	$A \cdot \bar{B} \cdot C \cdot D$	m_{11}	$\bar{A}+B+\bar{C}+\bar{D}$	M_{11}
1	1	0	0	0	$A \cdot B \cdot \bar{C} \cdot \bar{D}$	m_{12}	$\bar{A}+\bar{B}+C+D$	M_{12}
1	1	0	1	0	$A \cdot B \cdot \bar{C} \cdot D$	m_{13}	$\bar{A}+\bar{B}+C+\bar{D}$	M_{13}
1	1	1	0	0	$A \cdot B \cdot C \cdot \bar{D}$	m_{14}	$\bar{A}+\bar{B}+\bar{C}+D$	M_{14}
1	1	1	1	0	$A \cdot B \cdot C \cdot D$	m_{15}	$\bar{A}+\bar{B}+\bar{C}+\bar{D}$	M_{15}

SOP

$$Y = m_0 + m_2 + m_3 + m_6 + m_7 + m_8 + m_{10}$$

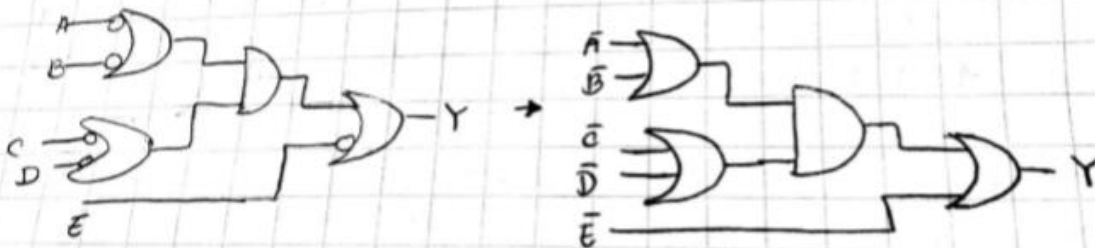
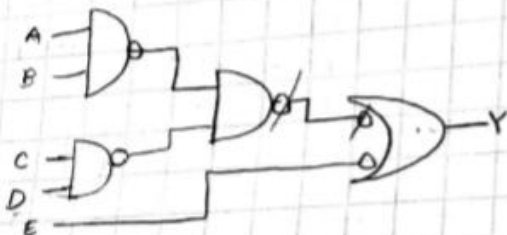
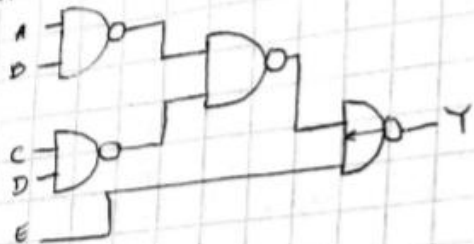
$$Y = (\bar{A} \cdot \bar{B} \cdot \bar{C} \cdot \bar{D}) + (\bar{A} \cdot \bar{B} \cdot C \cdot \bar{D}) + (\bar{A} \cdot \bar{B} \cdot C \cdot D) + (\bar{A} \cdot B \cdot \bar{C} \cdot \bar{D}) + (\bar{A} \cdot B \cdot C \cdot \bar{D}) + (\bar{A} \cdot B \cdot C \cdot D) + (A \cdot \bar{B} \cdot \bar{C} \cdot \bar{D})$$

POS

$$Y = M_1 \cdot M_4 \cdot M_5 \cdot M_9 \cdot M_{11} \cdot M_{12} \cdot M_{13} \cdot M_{14} \cdot M_{15}$$

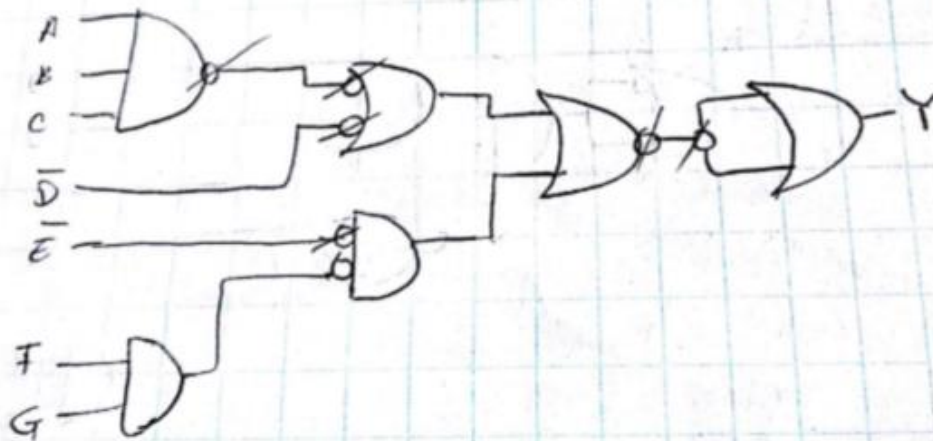
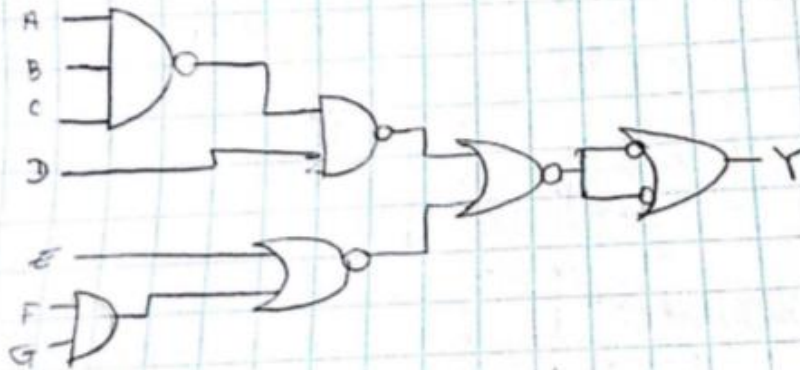
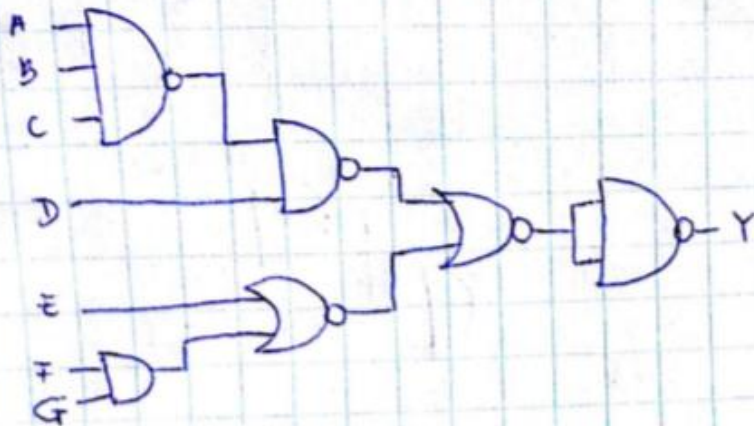
$$Y = (A+B+C+\bar{D}) \cdot (A+\bar{B}+C+D) \cdot (A+\bar{B}+\bar{C}+D) \cdot (\bar{A}+\bar{B}+C+\bar{D}) \cdot (\bar{A}+\bar{B}+\bar{C}+D) \cdot (\bar{A}+\bar{B}+C+D) \cdot (\bar{A}+\bar{B}+\bar{C}+\bar{D}) \cdot (\bar{A}+\bar{B}+\bar{C}+\bar{D})$$

Ejercicio 4
00.



$$Y = \left[(\bar{A} + B) \cdot (\bar{C} + \bar{D}) \right] + \bar{E}$$

01



$$Y = [(A \cdot B \cdot C) + \bar{D}] + [\bar{E} \cdot (\bar{F} \cdot \bar{G})]$$

Tabla 1. POS

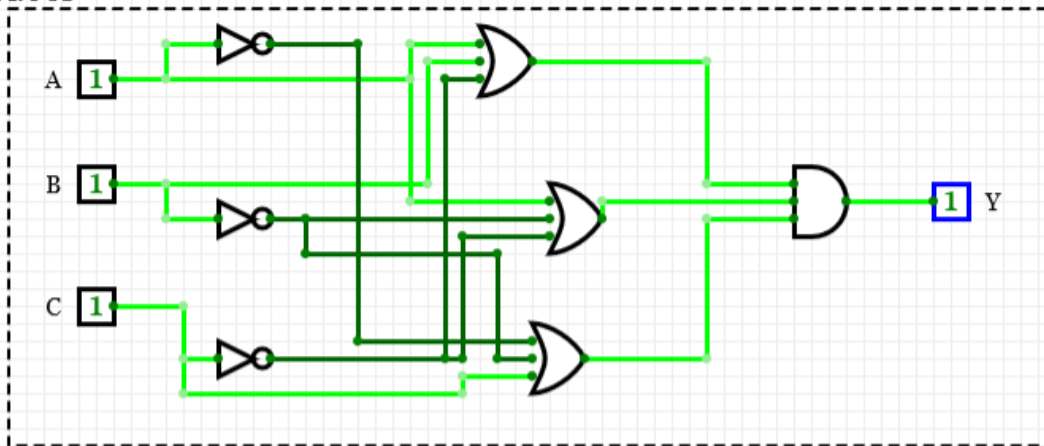


Tabla 02. SOP

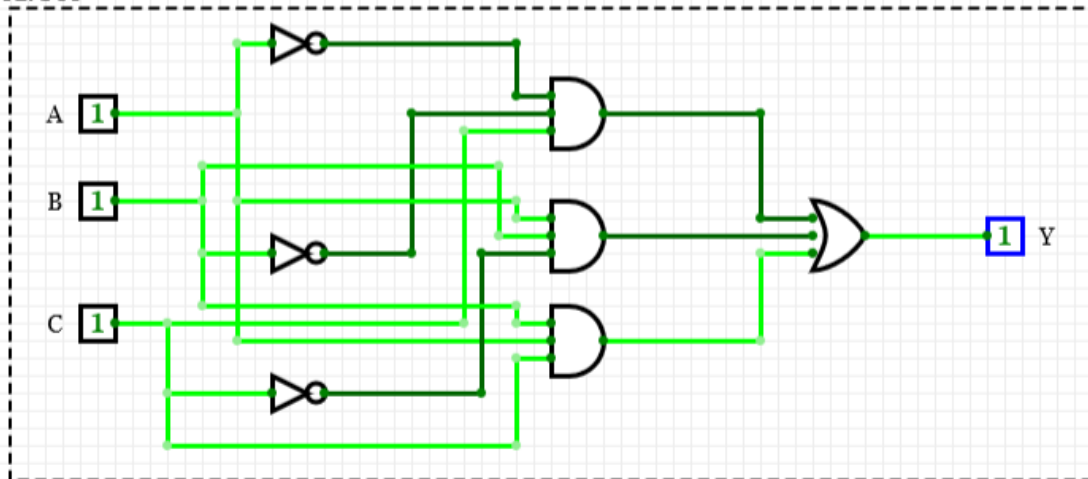


Tabla 03. SOP

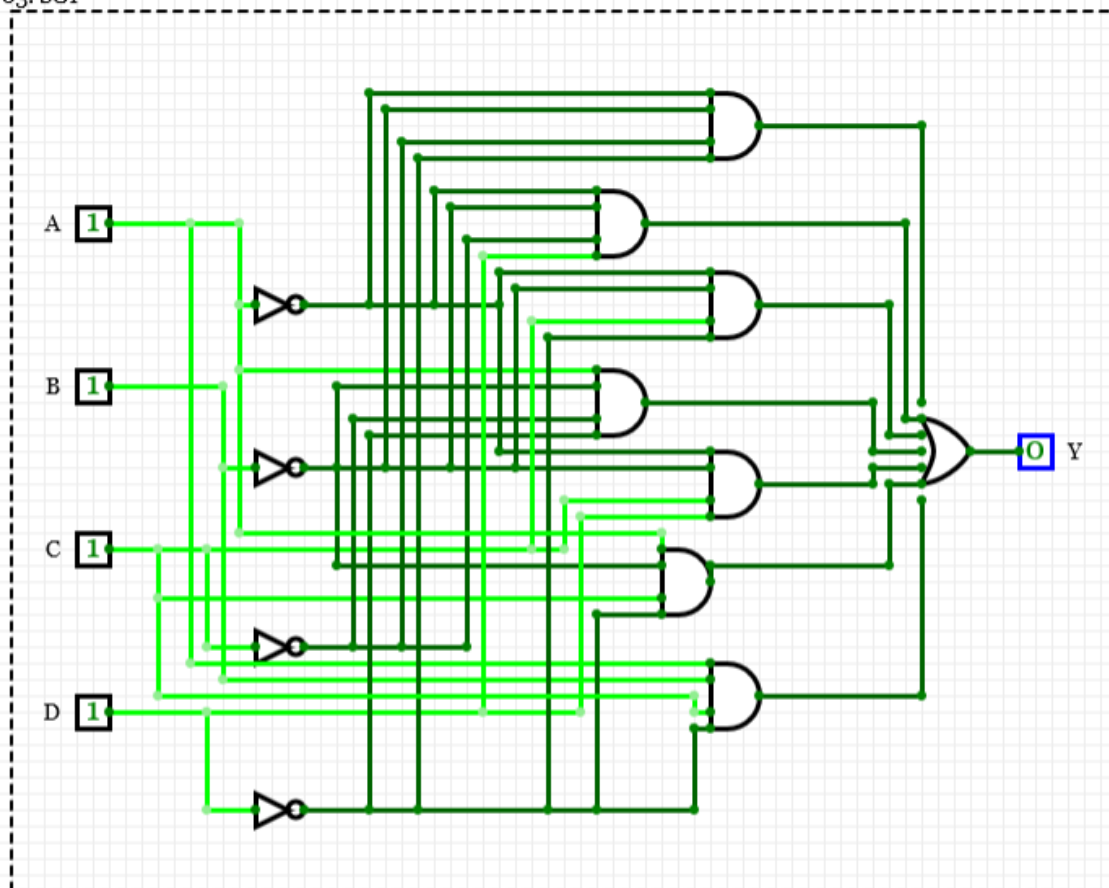


Tabla o4. SOP

