

# **Actividad 8**

# Contenidos.

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# Simplificación booleana.

$\begin{aligned} a) & A(A+B) \\ &= AA + AB \\ &= A + AB \quad (7) \\ &= A(1+B) \\ &= A(1) \quad (2) \\ &= \underline{A} \end{aligned}$	$\begin{aligned} b) & A(\bar{A} + AB) \\ &= A\bar{A} + AAB \\ &= 0 + AB \quad (7,8) \\ &= \underline{AB} \quad (1) \end{aligned}$	$\begin{aligned} c) & BC + \bar{B}C \\ &= C(B + \bar{B}) \\ &= C(1) \quad (6) \\ &= \underline{C} \end{aligned}$
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$\begin{aligned} d) & A(A + \bar{A}B) \\ &= AA + A\bar{A}B \\ &= A + 0B \quad (7,8) \\ &= A + 0 \quad (3) \\ &= \underline{A} \quad (1) \end{aligned}$	$\begin{aligned} e) & \bar{A}\bar{B}C + \bar{A}BC + A\bar{B}C \\ &= C(\bar{A}\bar{B} + \bar{A}B + A\bar{B}) \\ &= C(\bar{A}(\bar{B} + B) + A\bar{B}) \\ &= C(\bar{A}(1) + A\bar{B}) \quad (6) \\ &= C(\bar{A} + A\bar{B}) \\ &= C(\bar{A} + \bar{B}) \quad (11) \end{aligned}$
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# Tablas de verdad.

a)

A	Output
0	0
1	1

b)

A	B	Output
0	0	0
0	1	0
1	0	0
1	1	1

c)

C	Output
0	0
1	1

d)

A	Output
0	0
1	1

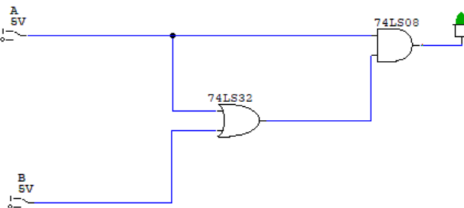
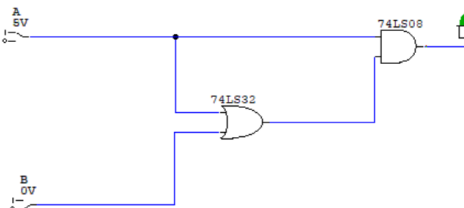
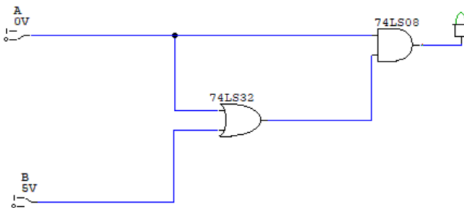
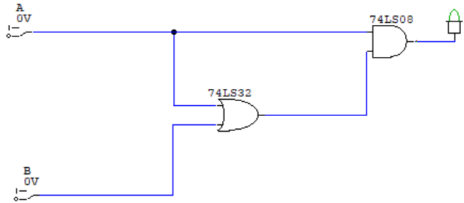
e)

A	$\sim A$	B	$\sim B$	C	Output
0	1	0	1	0	0
0	1	0	1	1	1
0	1	1	0	0	0
0	1	1	0	1	1
1	0	0	1	0	0
1	0	0	1	1	1
1	0	1	0	0	0
1	0	1	0	1	0

# Implementaciones.

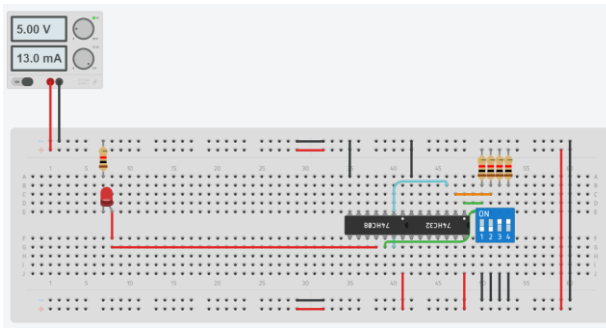
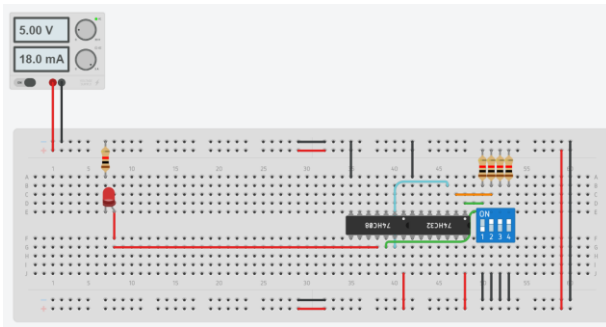
a)

CircuitMaker



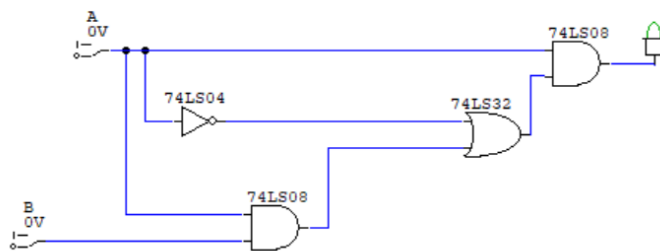
a)

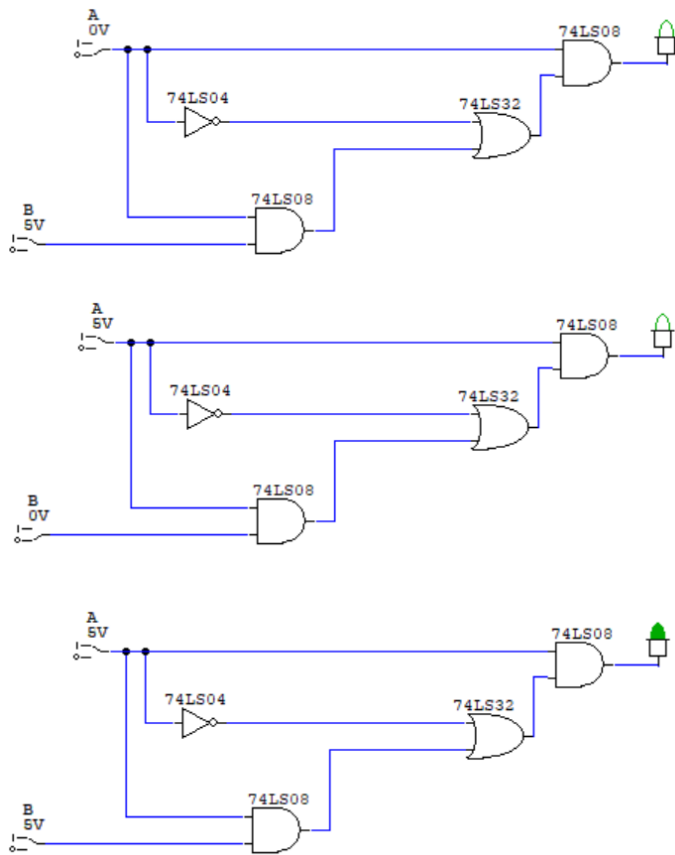
## TinkerCard (Solo output = 1)



b)

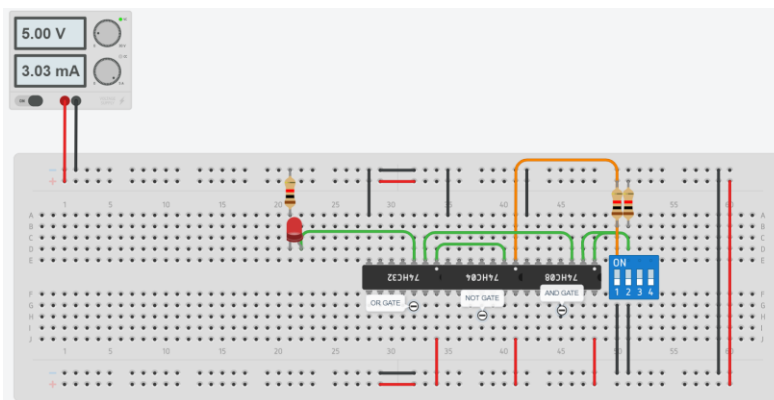
## CircuitMaker





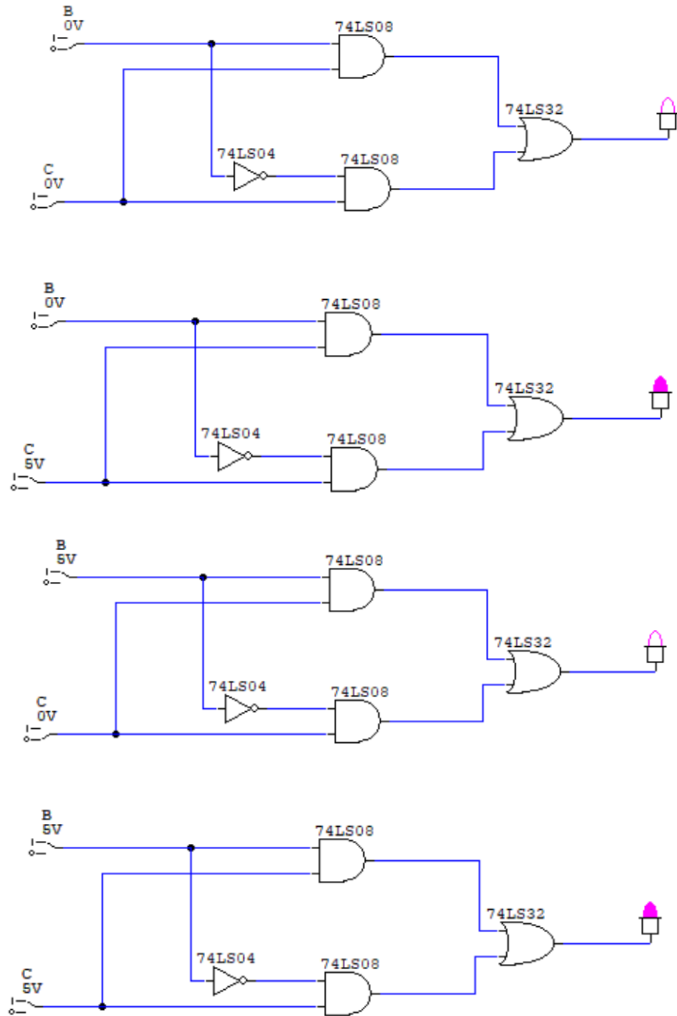
**b)**

**TinkerCad (Solo output = 1)**



c)

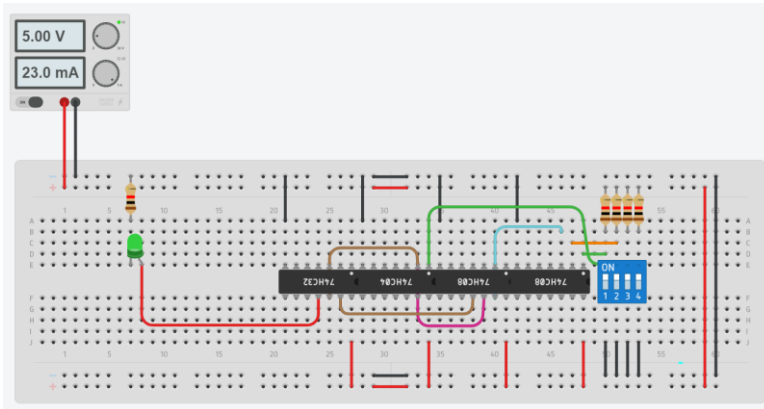
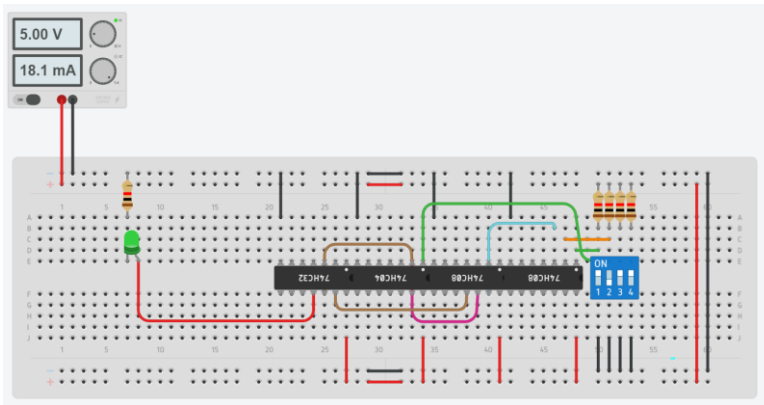
## CircuitMaker





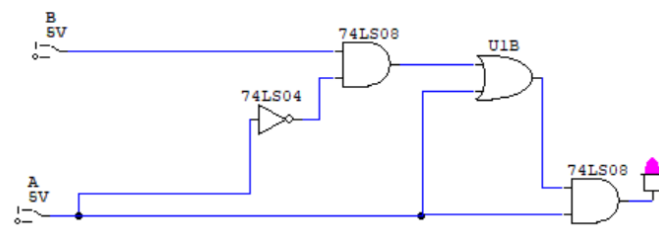
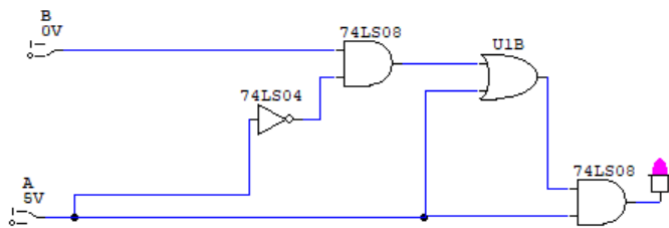
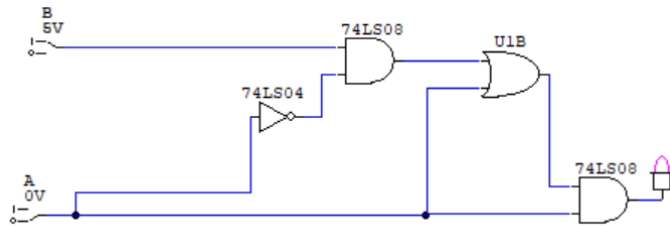
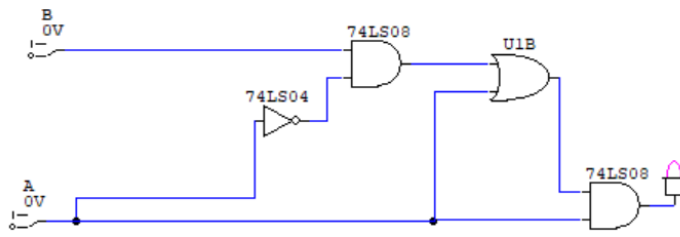
c)

## TinkerCad (Solo output = 1)



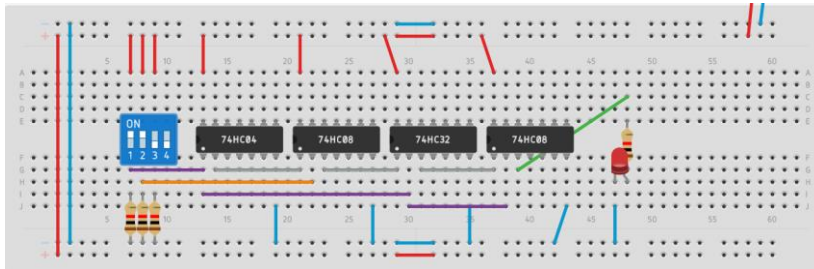
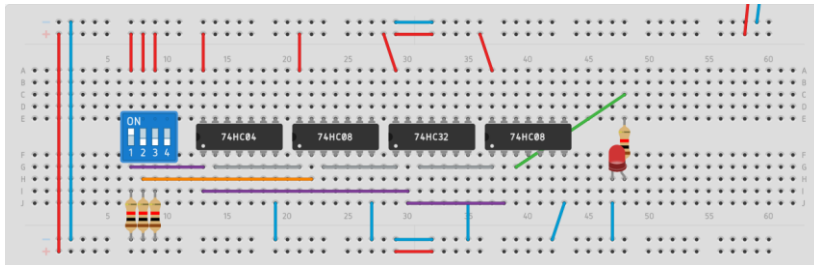
d)

## CircuitMaker



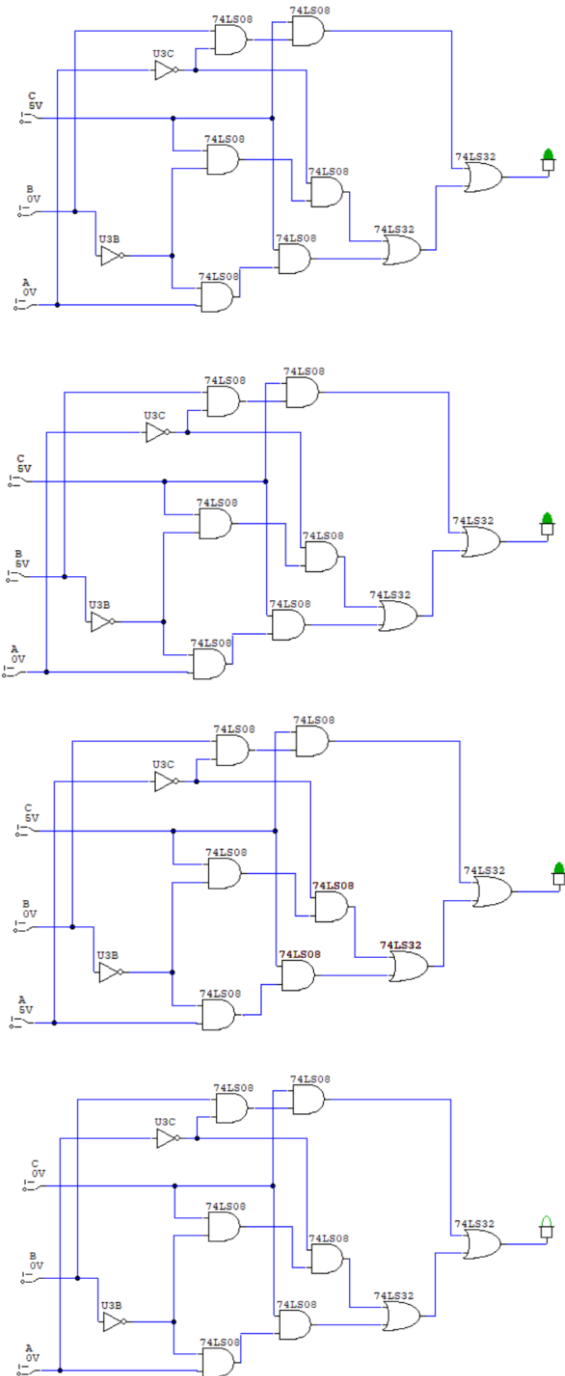
d)

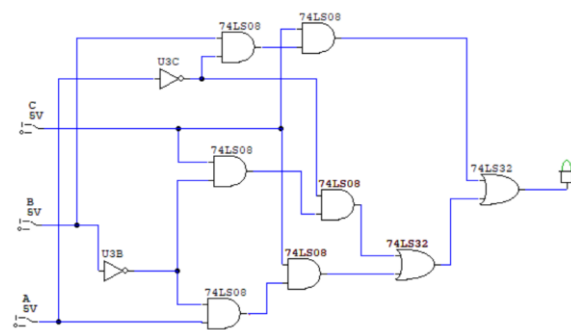
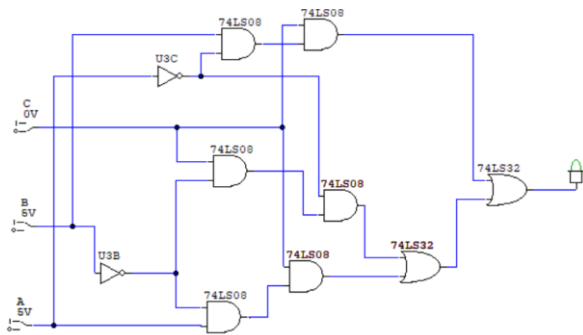
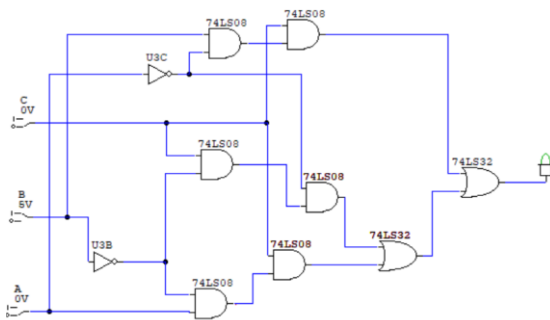
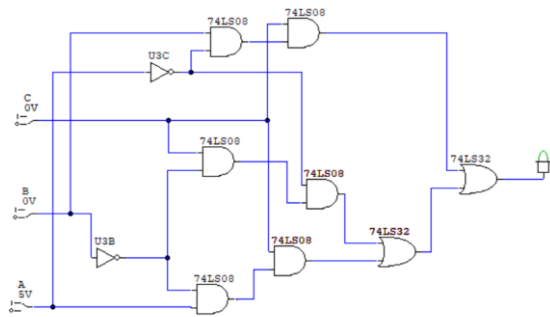
**TinkerCad (Solo output = 1)**



e)

## CircuitMaker





e)

## TinkerCad (Solo output = 1)

