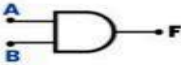
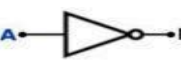


1. Implemente en simulador de protoboard (0971, TinkerCad) el comportamiento de las compuertas lógicas, utilizando únicamente las compuertas básicas AND, OR y NOT.

NOMBRE	TABLA DE VERDAD	CIRCUITO	OPERACIÓN															
AND 	<table><tr><td>A</td><td>B</td><td>F</td></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>1</td></tr></table>	A	B	F	0	0	0	0	1	0	1	0	0	1	1	1	74LS08 	$F=AB$
A	B	F																
0	0	0																
0	1	0																
1	0	0																
1	1	1																
NAND 	<table><tr><td>A</td><td>B</td><td>F</td></tr><tr><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td></tr></table>	A	B	F	0	0	1	0	1	1	1	0	1	1	1	0	74LS00 	$F=\overline{AB}$ $=\overline{A+B}$
A	B	F																
0	0	1																
0	1	1																
1	0	1																
1	1	0																
OR 	<table><tr><td>A</td><td>B</td><td>F</td></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>1</td></tr></table>	A	B	F	0	0	0	0	1	1	1	0	1	1	1	1	74LS32 	$F=A+B$
A	B	F																
0	0	0																
0	1	1																
1	0	1																
1	1	1																
NOR 	<table><tr><td>A</td><td>B</td><td>F</td></tr><tr><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>0</td></tr><tr><td>1</td><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td><td>0</td></tr></table>	A	B	F	0	0	1	0	1	0	1	0	0	1	1	0	74LS02 	$F=\overline{A+B}$ $=\overline{A}\cdot\overline{B}$
A	B	F																
0	0	1																
0	1	0																
1	0	0																
1	1	0																
XOR 	<table><tr><td>A</td><td>B</td><td>F</td></tr><tr><td>0</td><td>0</td><td>0</td></tr><tr><td>0</td><td>1</td><td>1</td></tr><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td></tr></table>	A	B	F	0	0	0	0	1	1	1	0	1	1	1	0	74LS86 	$F=A\oplus B$ $=A\overline{B}+\overline{A}B$
A	B	F																
0	0	0																
0	1	1																
1	0	1																
1	1	0																
NOT 	<table><tr><td>A</td><td>F</td></tr><tr><td>0</td><td>1</td></tr><tr><td>1</td><td>0</td></tr></table>	A	F	0	1	1	0	74LS04 	$F=\overline{A}$									
A	F																	
0	1																	
1	0																	



A	B	Out
0	0	1
0	1	0
1	0	0
1	1	1

74266

$$Y = \overline{A \oplus B}$$

$$Y = \overline{\overline{A}B + A\overline{B}}$$