Proyecto 1. Función Booleana con compuertas NAND y NOR

Alumno:

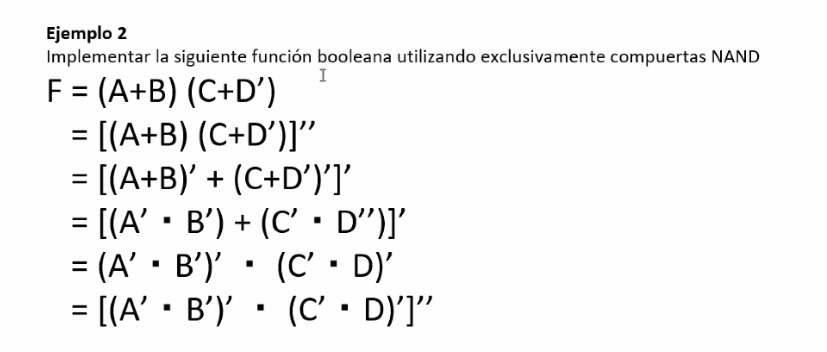
* Barrera Peña Víctor Miguel

Grupo: 6

Ciudad universitaria, Ciudad de México

# Introducción

# Desarrollo



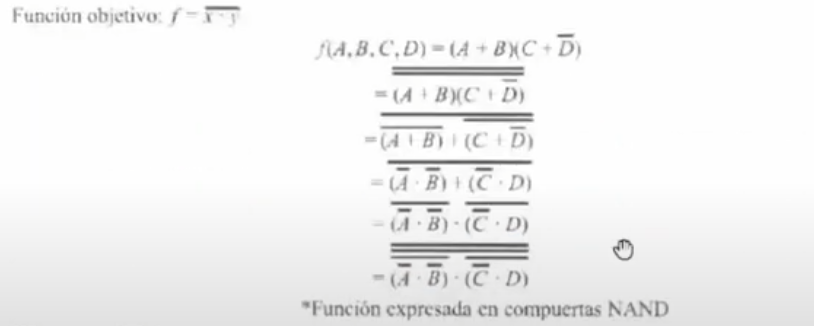
con nands y nors

## NAND

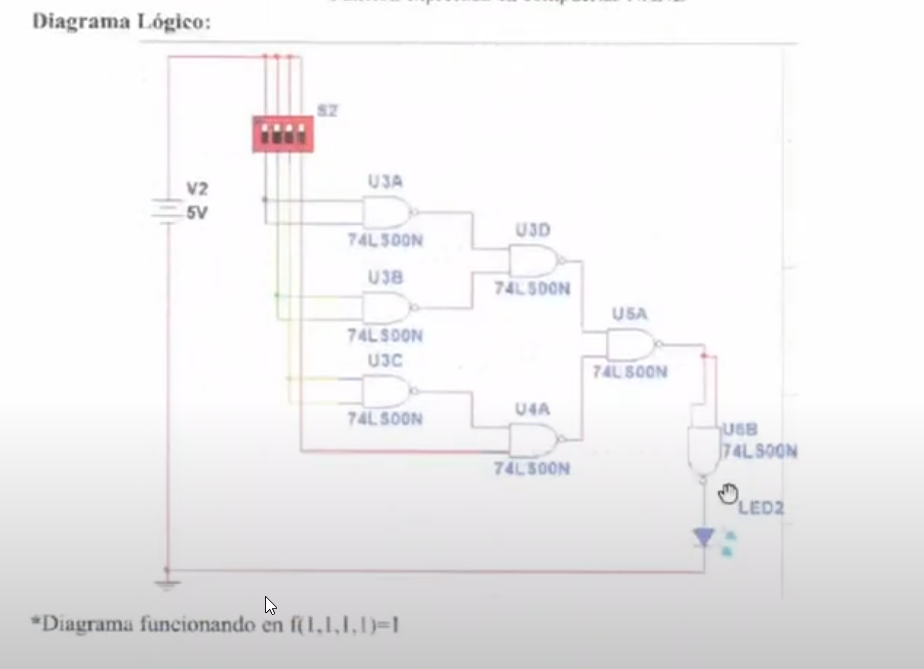
### Álgebra de Boole

Convertiremos al función original en una función únicamente compuesta sólo por NAND´S.

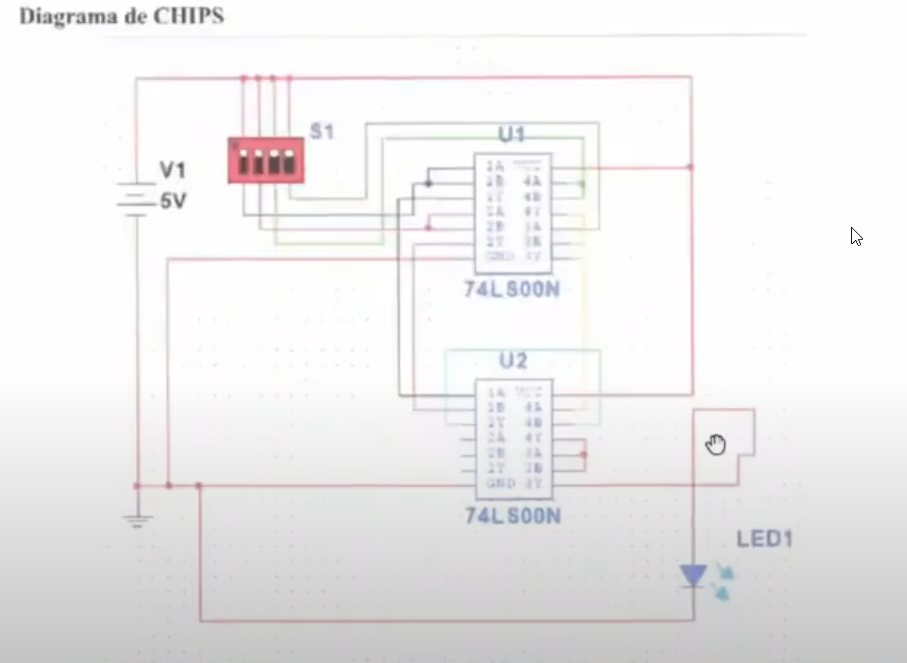
Forma objetivo



### Diagrama lógico



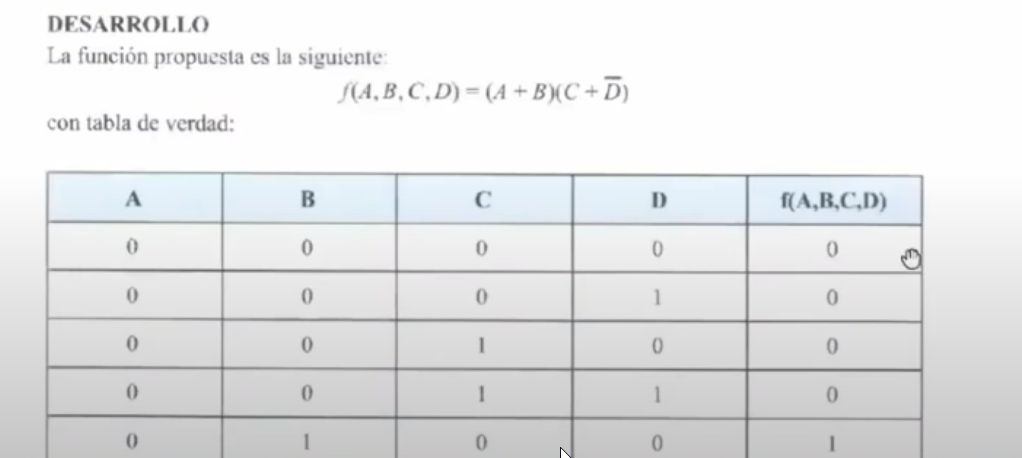
### Diagrama físico o patigrama

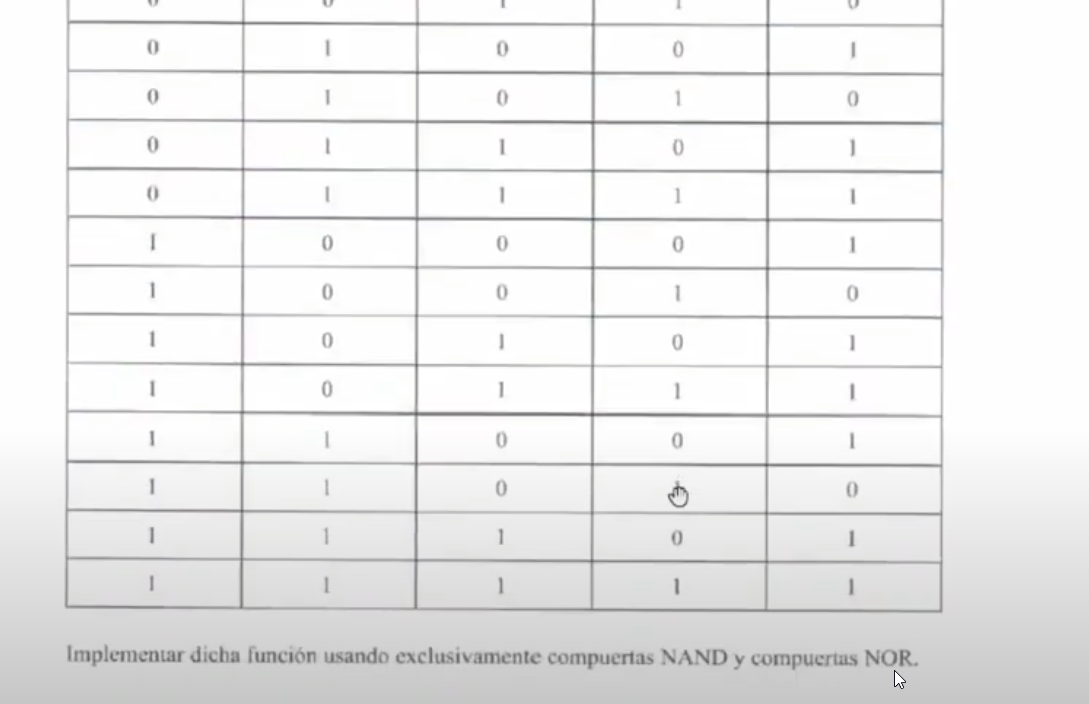


### Tabla de verdad

La función propuesta es la siguiente:

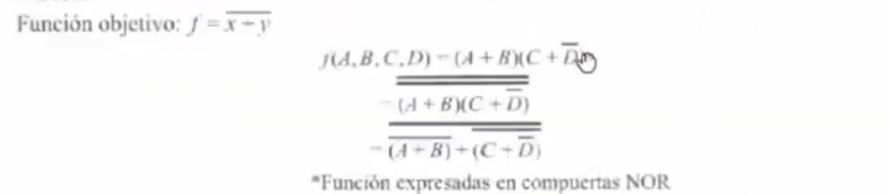
| A | B | C | D |  |  |
| --- | --- | --- | --- | --- | --- |
| 0 | 0 | 0 | 0 | 0 |  |
| 0 | 0 | 0 | 1 | 0 |  |
| 0 | 0 | 1 | 0 | 0 |  |
| 0 | 0 | 1 | 1 | 0 |  |
| 0 | 1 | 0 | 0 | 1 |  |
| 0 | 1 | 0 | 1 | 0 |  |
| 0 | 1 | 1 | 0 | 1 |  |
| 0 | 1 | 1 | 1 | 1 |  |
| 1 | 0 | 0 | 0 | 1 |  |
| 1 | 0 | 0 | 1 | 0 |  |
| 1 | 0 | 1 | 0 | 1 |  |
| 1 | 0 | 1 | 1 | 1 |  |
| 1 | 1 | 0 | 0 | 1 |  |
| 1 | 1 | 0 | 1 | 0 |  |
| 1 | 1 | 1 | 0 | 1 |  |
| 1 | 1 | 1 | 1 | 1 |  |





## NOR

### Álgebra de Boole

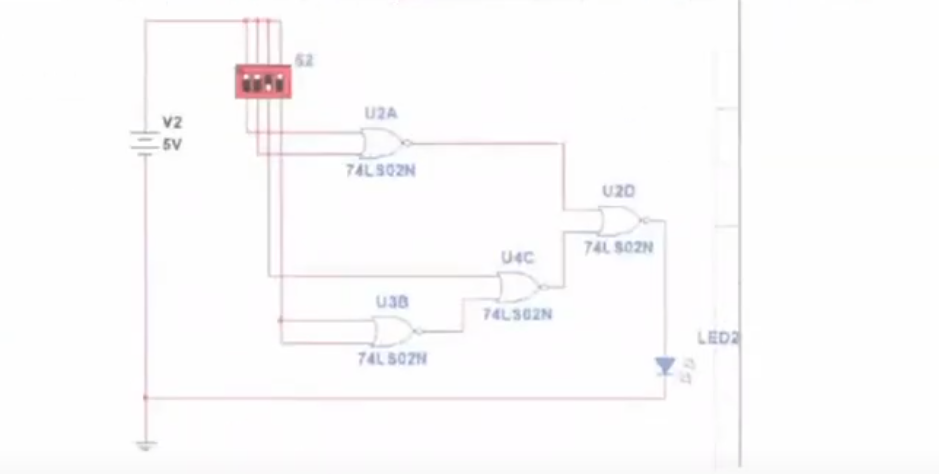


Forma esperada

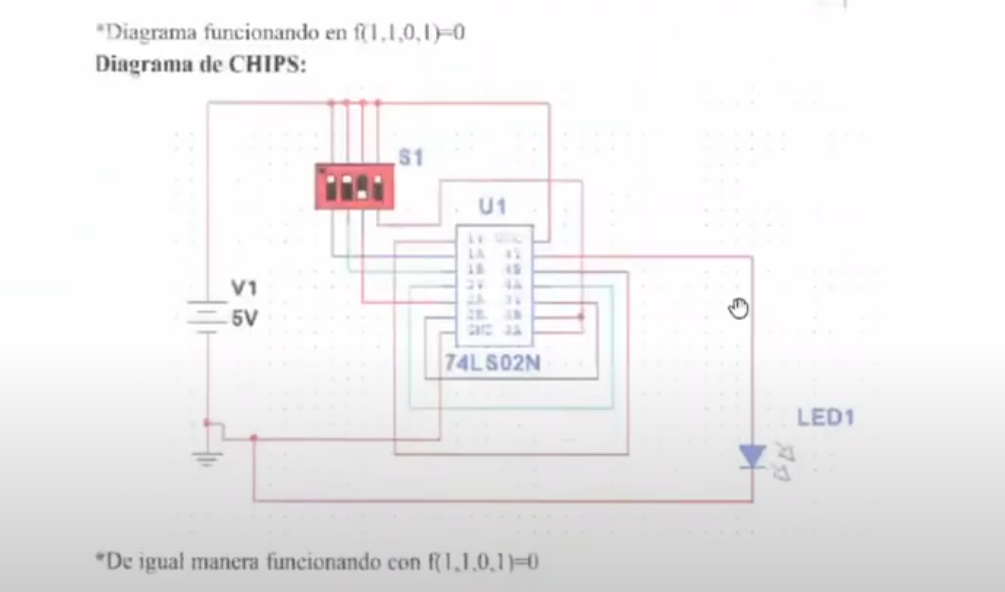
## Boole

### Diagrama Lógico

![]( <nand.pdf>



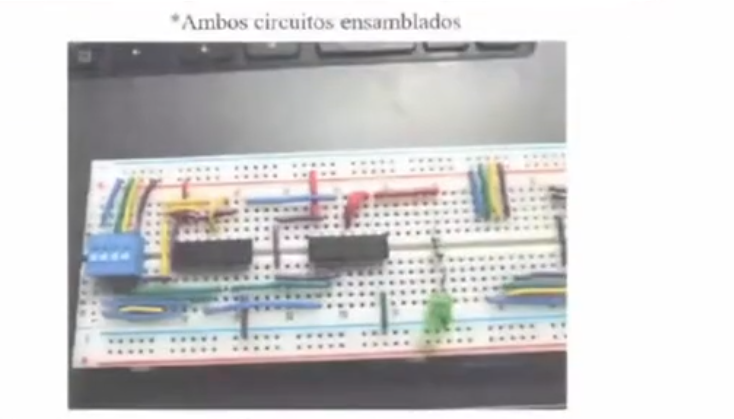
### Daigrama físico o patigrama

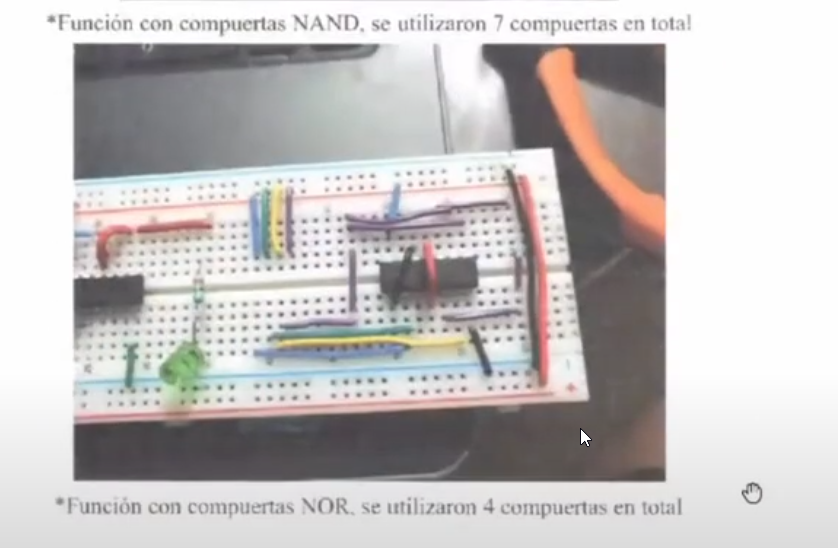


## Ensamblado Físico

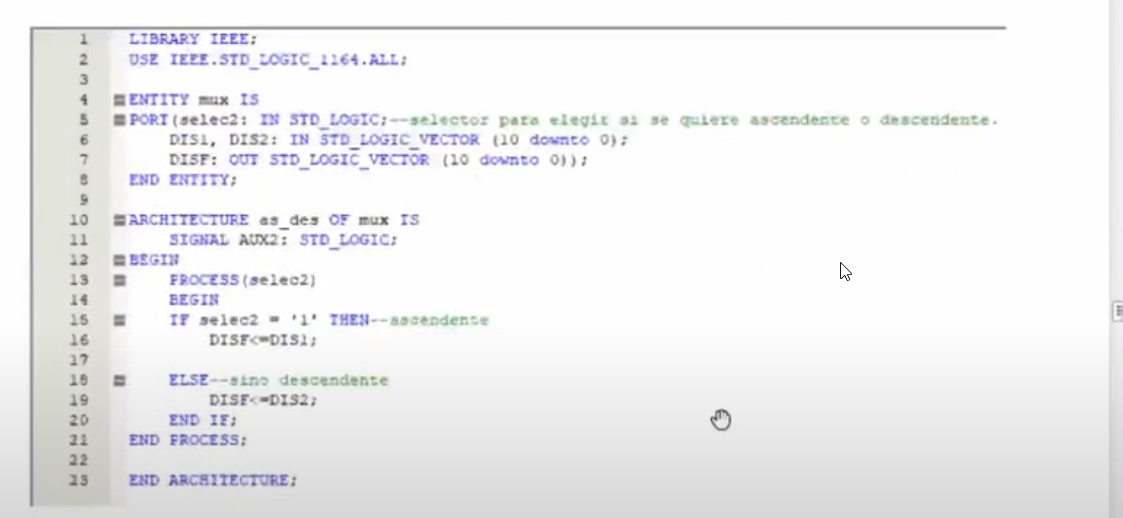
Compuertas nand tfl 7400 (nand)



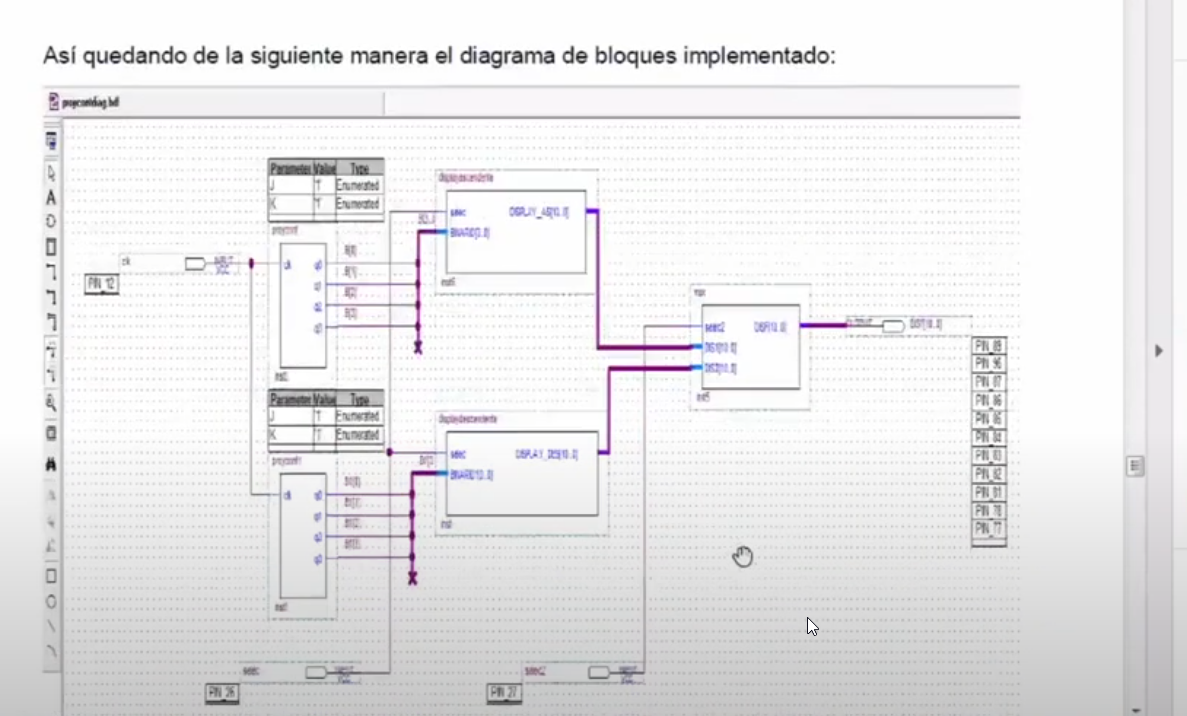




# Codigo Quartus



# Diagrama de bloques



### Conclusión

Barrera Peña Victor Miguel

## Anexo

## Pasar entre compuertas

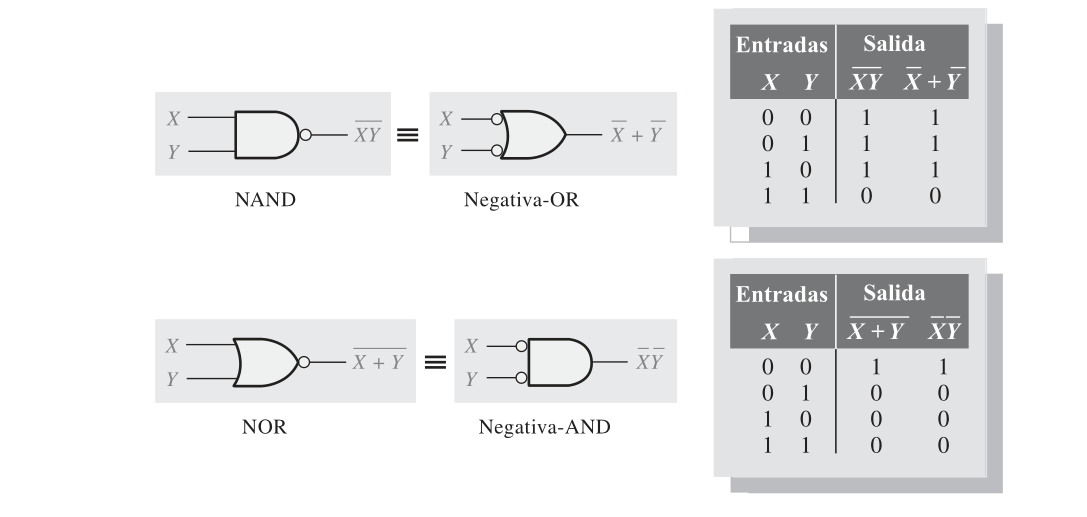
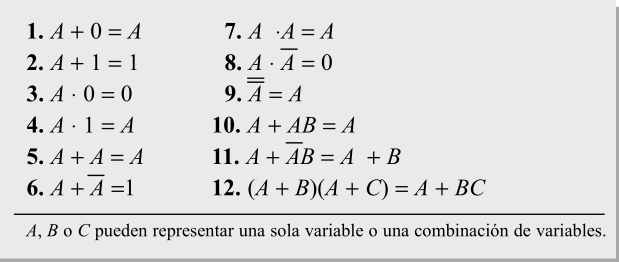


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## Booleana NAND´s



### Reglas álgebra de Boole

