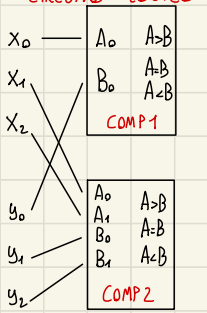
# ESERCIZI

## ESERCIZI 25/10/2022

ES. 1 REALIZZARE UN CONFRONTATORE TRA NUMERI DI TRE BIT IN Cp2.

CIRCUITO LOGICO:




COMP1

| $A_0$ | $B_0$ | A>B | A=B | A<B |
|---|---|---|---|---|
| 0 | 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 1 | 0 |
| 1 | 0 | 1 | 0 | 0 |

MAPPE DI KARNAUGH →

A>B

| $A_0$ \ $B_0$ | 0 | 1 |
|---|---|---|
| 0 | 0 | 0 |
| 1 | 1 | 0 |

$F = /B_0 A_0$

A=B

| $A_0$ \ $B_0$ | 0 | 1 |
|---|---|---|
| 0 | 0 | 1 |
| 1 | 0 | 0 |

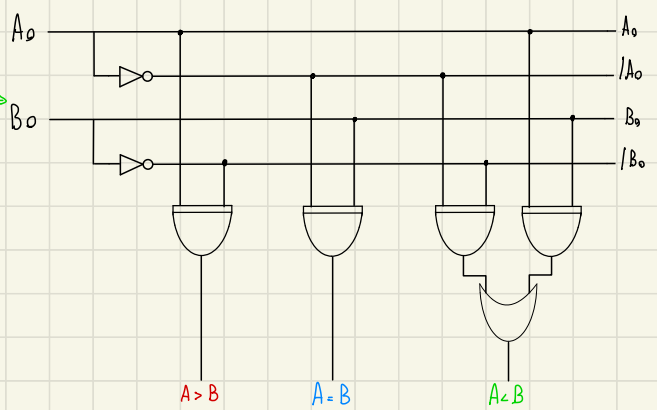
$F = /A_0 B_0$

A<B

| $A_0$ \ $B_0$ | 0 | 1 |
|---|---|---|
| 0 | 1 | 0 |
| 1 | 0 | 1 |

$F = /A_0 /B_0 + A_0 B_0$

CIRCUITO LOGICO →

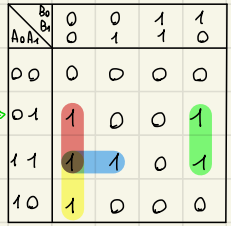


COMP 2

| $A_0$ | $A_1$ | $B_0$ | $B_1$ | A>B | A=B | A<B |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 0 | 0 | 1 | 1 | 0 | 0 | 1 |
| 0 | 1 | 0 | 0 | 1 | 0 | 0 |
| 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 0 | 1 | 1 | 0 | 1 | 0 | 0 |
| 0 | 1 | 1 | 1 | 0 | 0 | 1 |
| 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 0 | 1 | 0 | 0 | 1 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 1 | 0 | 1 | 1 | 0 | 0 |
| 1 | 1 | 1 | 0 | 1 | 0 | 0 |
| 1 | 1 | 1 | 1 | 0 | 1 | 0 |

MAPPE DI KARNAUGH

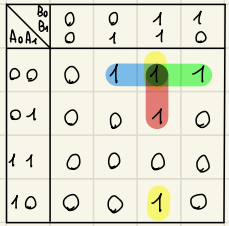
A>B




$F = /B_0 /B_1 A_0 + /B_0 /B_1 A_1 + /B_0 A_0 A_1 + B_0 /B_1 A_1$

$= /B_0 /B_1 (A_0 + A_1) + A_1 (/B_0 A_0 + B_0 /B_1)$

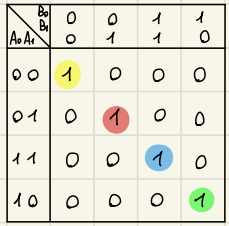
A=B




$F = B_0 B_1 /A_1 + B_0 B_1 /A_0 + B_1 /A_0 + /A_0 /A_1 B_1 =$

$= B_0 B_1 (/A_1 + /A_0) + B_1 /A_0 (/A_1)$

A<B



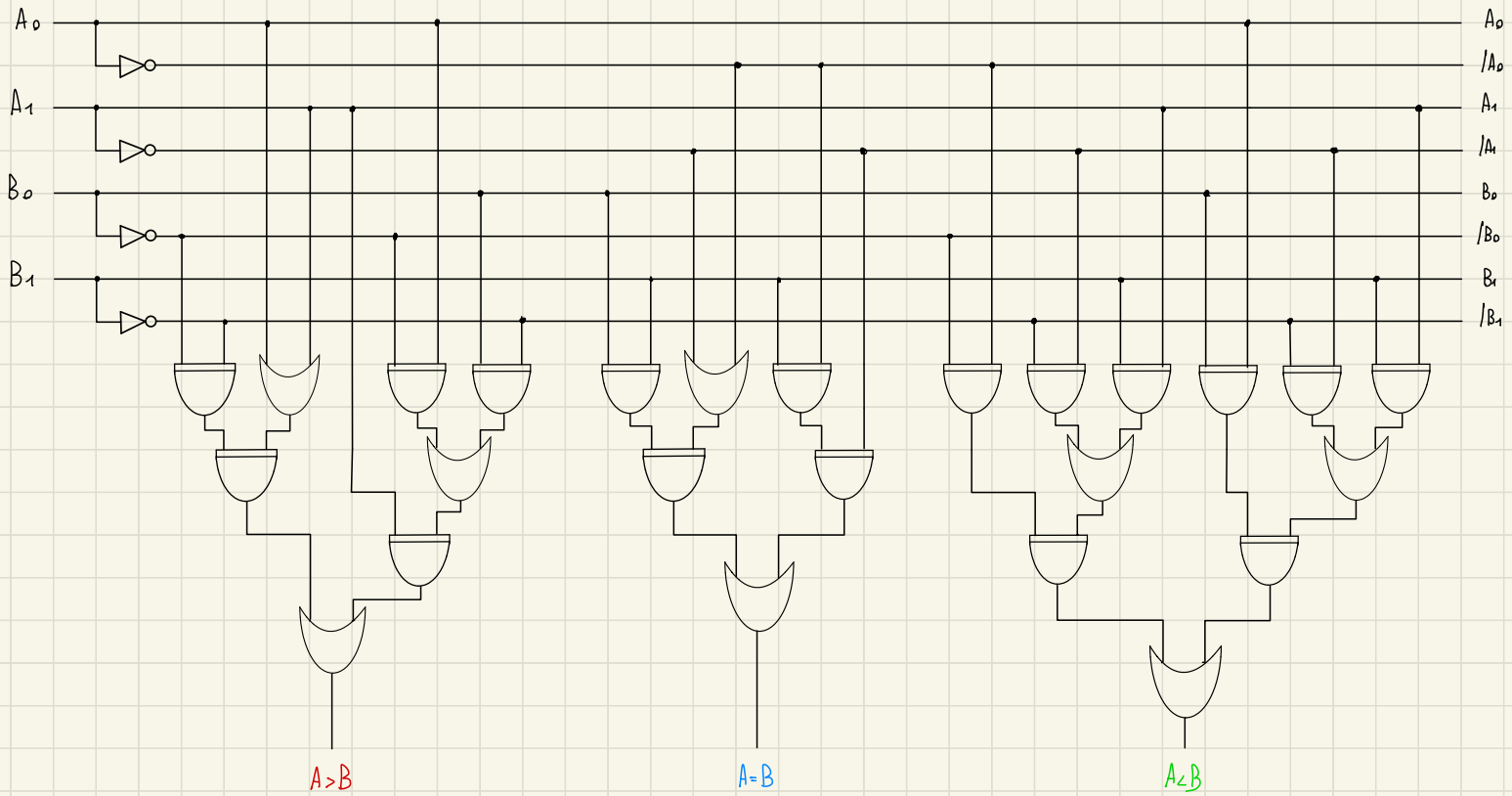

$F = /B_0 /B_1 /A_0 /A_1 + /B_0 B_1 /A_0 A_1 +$

$B_0 /B_1 A_0 /A_1 + B_0 B_1 A_0 A_1 =$

$= /B_0 /A_0 (/B_1 /A_1 + B_1 A_1) +$

$B_0 A_0 (/B_1 /A_1 + B_1 A_1)$

CIRCUITO LOGICO


A0
A1
B0
B1
A0
/A0
A1
/A1
B0
/B0
B1
/B1
A>B
A=B
A<B