



UNIVERSITÀ DEGLI STUDI DI SALERNO

Fondamenti di Informatica

Circuiti Logici

– Esercizi svolti in aula (penna digitale) –

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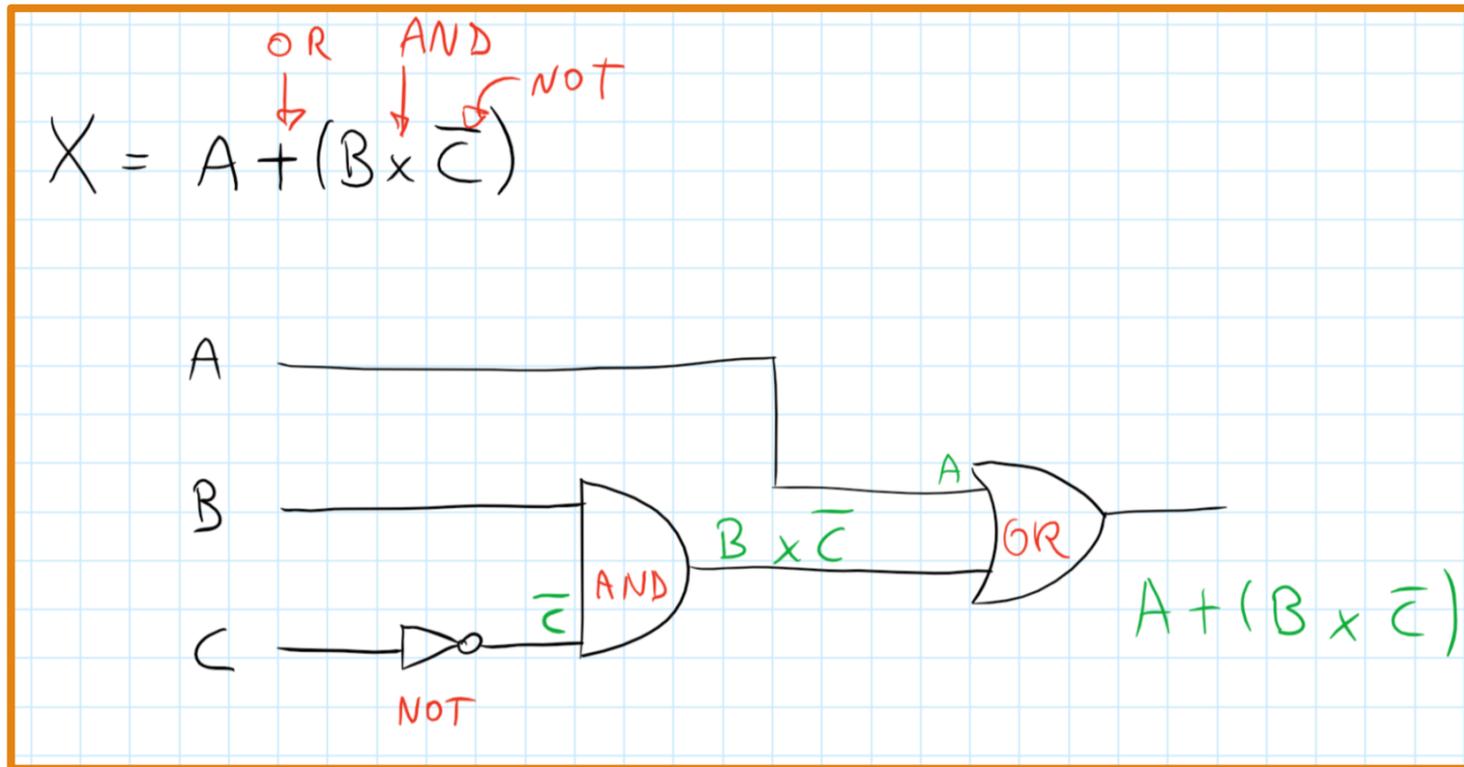
A.A. 2016/17

Esercizi

Indice

- Da *funzione booleana a circuito logico*:
 - Esercizio 1
 - Esercizio 2
 - Esercizio 3
- Da *circuito logico a funzione booleana*:
 - Esercizio 4

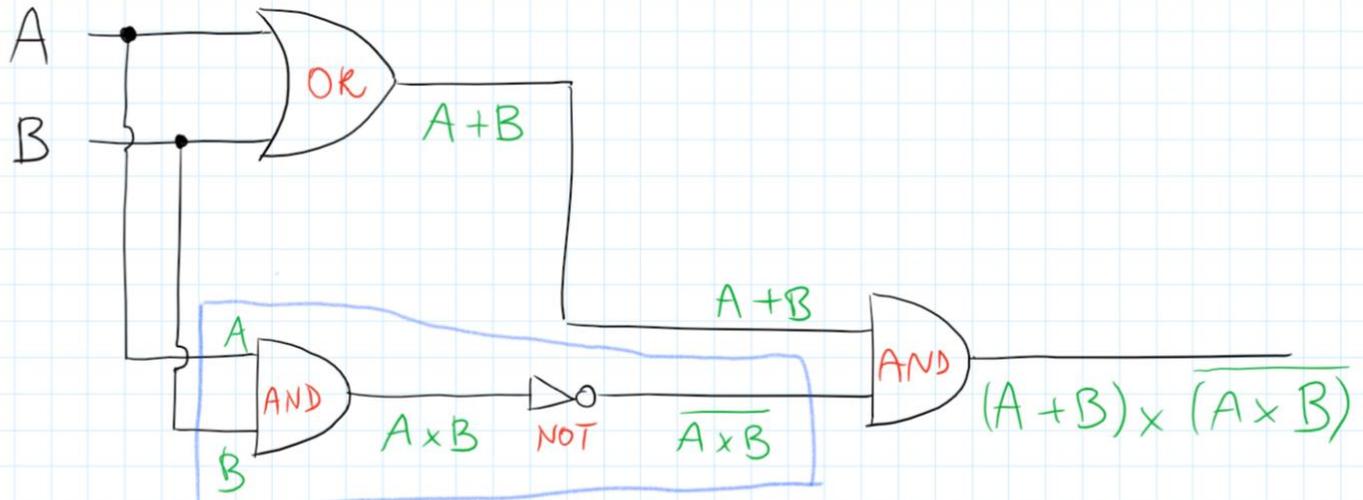
Esercizio 1



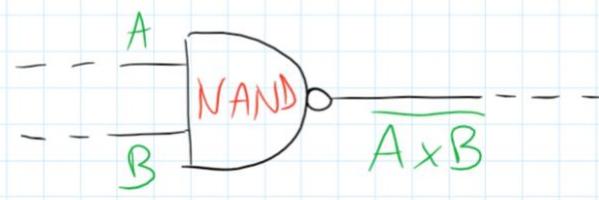
Esercizio 2

$$C = (A + B) \times \overline{(A \times B)}$$

Handwritten annotations in red: "OR" with an arrow pointing to the "+" sign, "AND" with an arrow pointing to the "x" sign, "NOT" with an arrow pointing to the overline, and another "AND" with an arrow pointing to the "x" sign below the equation.



Si può anche utilizzare la porta logica NAND al posto delle porte logiche AND e NOT

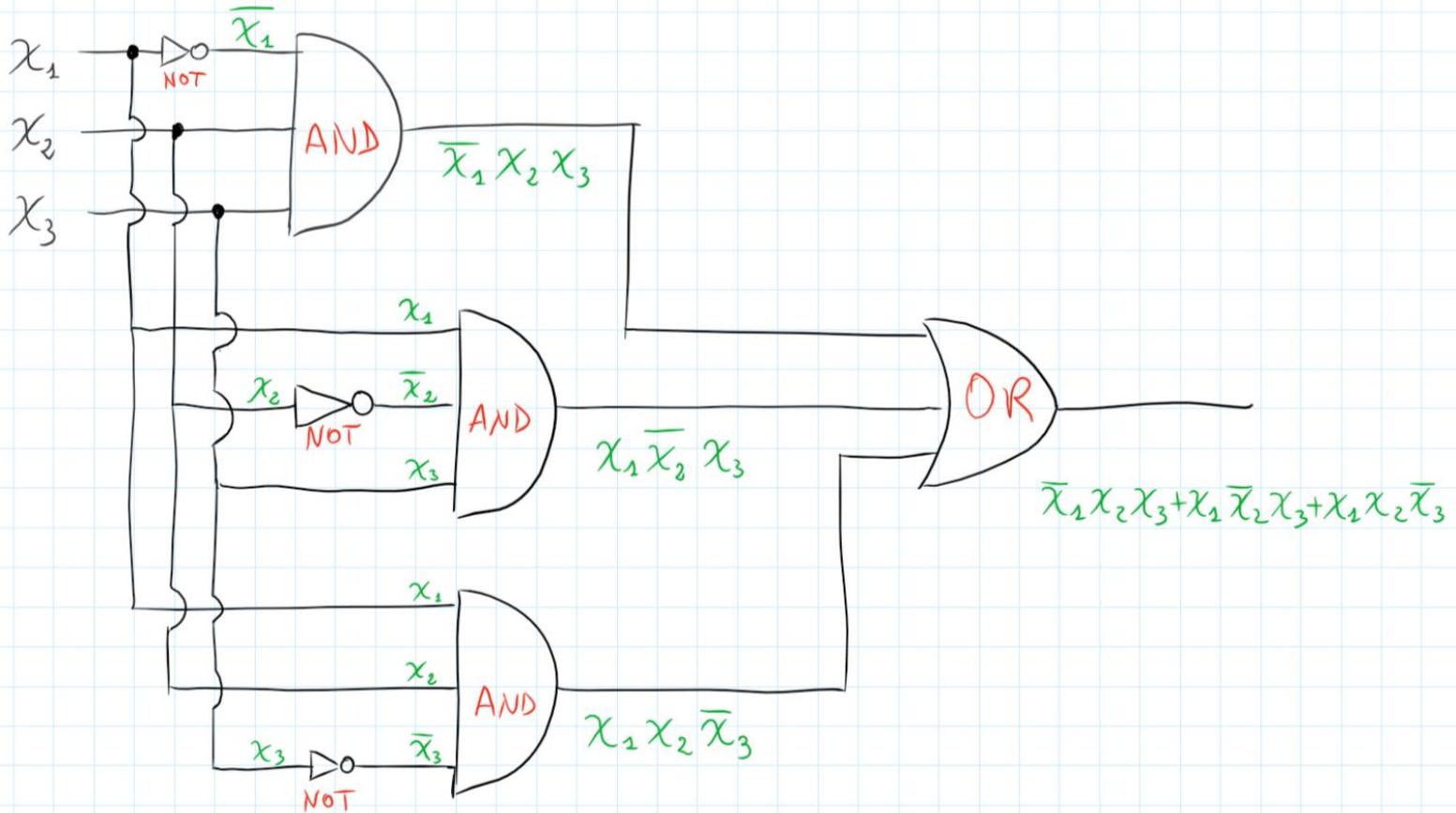


Esercizio 3

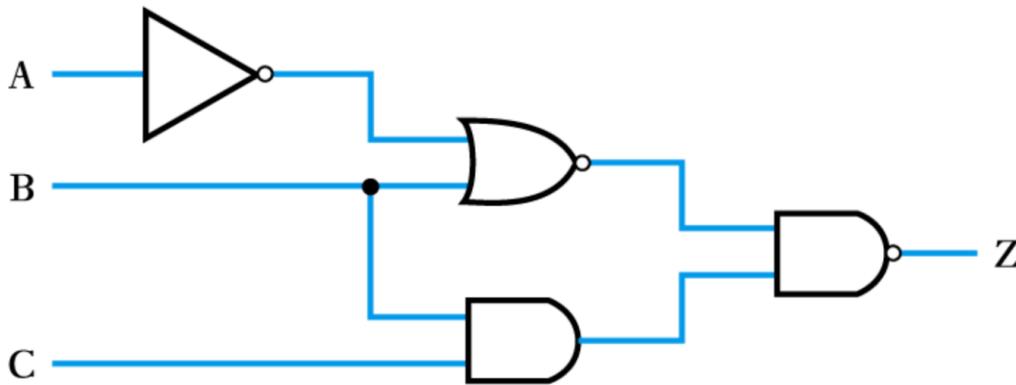
$$F = \overline{x_1} x_2 x_3 + x_1 \overline{x_2} x_3 + x_1 x_2 \overline{x_3}$$

AND (3 VARIABILI) AND (3 VARIABILI) AND (3 VARIABILI)

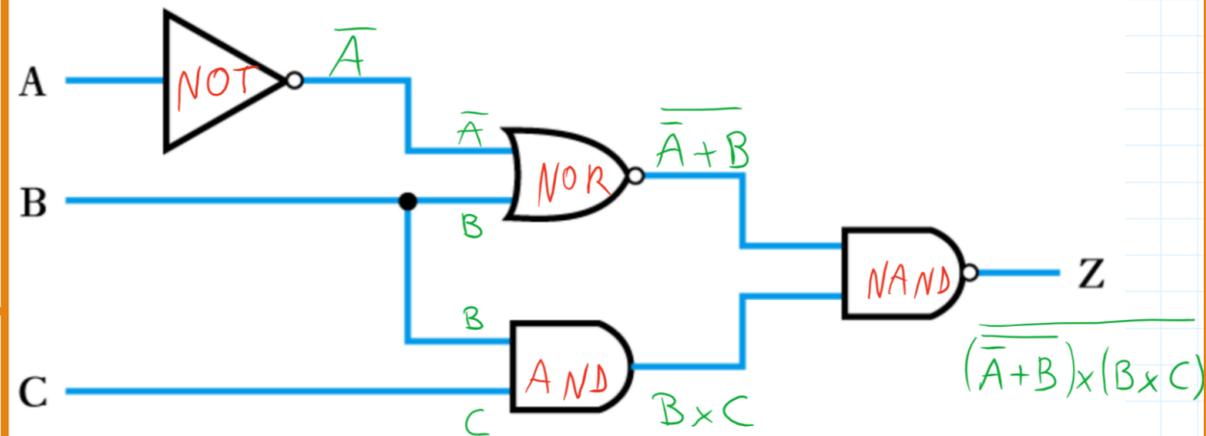
OR



Esercizio 4



- Procedere progressivamente dagli input verso l'output aggiungendo a turno le espressioni logiche all'output di ciascuna porta logica



$$Z = \overline{(\bar{A} + B) \times (B \times C)}$$