

8. XOR

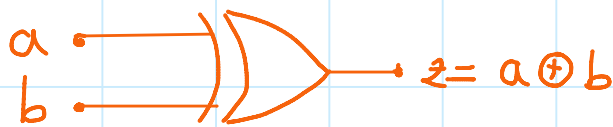
martedì 14 aprile 2020

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XOR (OR ESCLUSIVO)

a	b	$a \oplus b$
0	0	0
0	1	1
1	0	1
1	1	0

$$a \oplus b = \bar{a}b + a\bar{b}$$

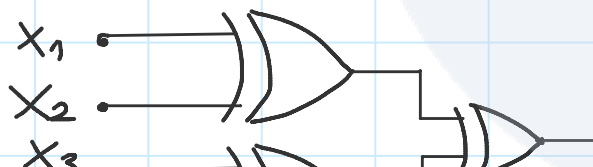


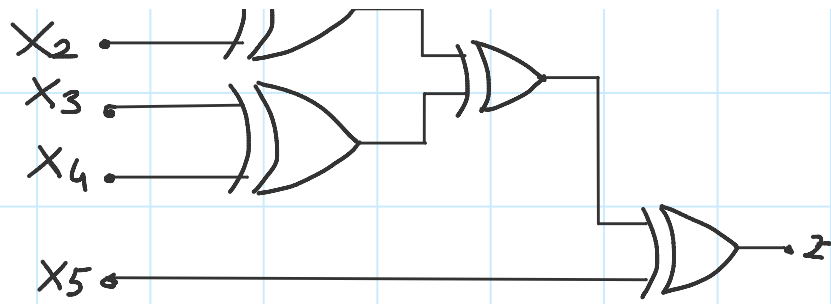
Proprietà associativa

$$a \oplus (b \oplus c) = (a \oplus b) \oplus c$$

Inoltre;

$x_1 \oplus x_2 \oplus \dots \oplus x_n \equiv \text{generatore di parità}$





$$Z = ((x_1 \oplus x_2) \oplus (x_3 \oplus x_4)) \oplus x_5$$

(questo circuito richiederebbe
16 porte AND e una porta
OR a 16 ingressi, a 2 livelli)