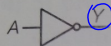
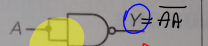
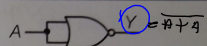
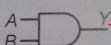
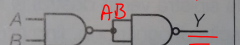
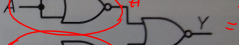
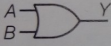
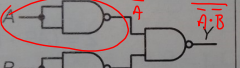
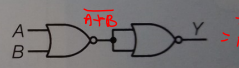


IMPLEMENTAZIONE NAND & NOR

Porte fondamentali	A porte NAND	A porte NOR
① 	 $Y = \overline{A \cdot A} = \overline{A}$	 $Y = \overline{A + A} = \overline{A}$
② 	 $Y = \overline{A \cdot B}$	 $Y = \overline{A + B}$
③ 	 $Y = \overline{\overline{A \cdot B}} = A \cdot B$	 $Y = \overline{\overline{A + B}} = A + B$

①	<table border="1"> <tr><th>A</th><th>Y</th></tr> <tr><td>0</td><td>1</td></tr> <tr><td>1</td><td>0</td></tr> </table>	A	Y	0	1	1	0	<table border="1"> <tr><th>A</th><th>$A \cdot A$</th><th>$\overline{A \cdot A}$</th></tr> <tr><td>0</td><td>0</td><td>1</td></tr> <tr><td>1</td><td>1</td><td>0</td></tr> </table>	A	$A \cdot A$	$\overline{A \cdot A}$	0	0	1	1	1	0	<table border="1"> <tr><th>A</th><th>$A + A$</th><th>$\overline{A + A}$</th></tr> <tr><td>0</td><td>0</td><td>1</td></tr> <tr><td>1</td><td>1</td><td>0</td></tr> </table>	A	$A + A$	$\overline{A + A}$	0	0	1	1	1	0
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A	$A + A$	$\overline{A + A}$																									
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②	<table border="1"> <tr><th>A</th><th>B</th><th>Y</th></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	Y	0	0	0	0	1	0	1	0	0	1	1	1	<table border="1"> <tr><th>A</th><th>B</th><th>$A \cdot B$</th><th>$\overline{A \cdot B}$</th><th>$\overline{\overline{A \cdot B}}$</th></tr> <tr><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>0</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> </table>	A	B	$A \cdot B$	$\overline{A \cdot B}$	$\overline{\overline{A \cdot B}}$	0	0	0	1	0	0	1	0	1	0	1	0	0	1	0	1	1	1	0	1	<table border="1"> <tr><th>A</th><th>B</th><th>\overline{A}</th><th>\overline{B}</th><th>$\overline{A + B}$</th><th>$\overline{\overline{A + B}}$</th></tr> <tr><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> </table>	A	B	\overline{A}	\overline{B}	$\overline{A + B}$	$\overline{\overline{A + B}}$	0	0	1	1	1	0	0	1	1	0	1	0	1	0	0	1	1	0	1	1	0	0	0	1
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③	<table border="1"> <tr><th>A</th><th>B</th><th>Y</th></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	Y	0	0	0	0	1	1	1	0	1	1	1	1	<table border="1"> <tr><th>A</th><th>B</th><th>\overline{A}</th><th>\overline{B}</th><th>$\overline{A \cdot B}$</th><th>$\overline{\overline{A \cdot B}}$</th></tr> <tr><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>1</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>1</td><td>1</td><td>0</td><td>0</td><td>0</td><td>1</td></tr> </table>	A	B	\overline{A}	\overline{B}	$\overline{A \cdot B}$	$\overline{\overline{A \cdot B}}$	0	0	1	1	1	0	0	1	1	0	0	1	1	0	0	1	0	1	1	1	0	0	0	1	<table border="1"> <tr><th>A</th><th>B</th><th>$A + B$</th><th>$\overline{A + B}$</th><th>$\overline{\overline{A + B}}$</th></tr> <tr><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>0</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>1</td><td>0</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>1</td><td>1</td><td>1</td><td>0</td><td>1</td></tr> </table>	A	B	$A + B$	$\overline{A + B}$	$\overline{\overline{A + B}}$	0	0	0	1	0	0	1	1	0	1	1	0	1	0	1	1	1	1	0	1
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?

$\overline{\overline{A \cdot B}} \stackrel{?}{=} \overline{A \cdot B}$

NO

A	B	\overline{A}	\overline{B}	$\overline{A \cdot B}$	$\overline{\overline{A \cdot B}}$
0	0	1	1	1	0
0	1	1	0	0	1
1	0	0	1	0	1
1	1	0	0	0	1

?

$\overline{A + B} \stackrel{?}{=} \overline{A + B}$

NO

A	B	\overline{A}	\overline{B}	$\overline{A + B}$	$\overline{\overline{A + B}}$
0	0	1	1	1	0
0	1	1	0	1	0
1	0	0	1	1	0
1	1	0	0	0	1

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

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