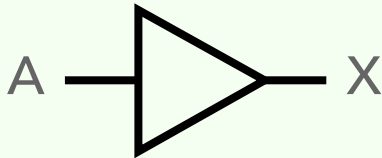
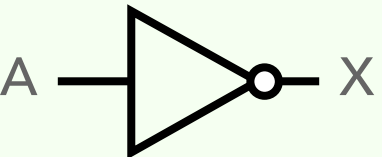
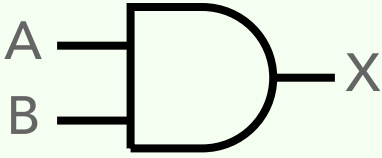
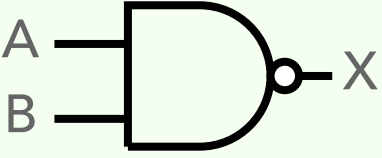
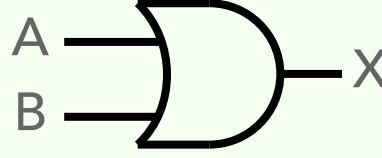
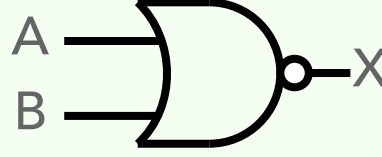
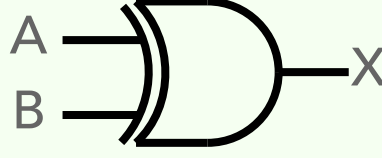
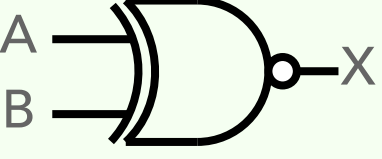


# Logic Truth Tables

Logic Function	Logic Symbol	Truth Table	Boolean Expression															
Buffer		<table border="1" data-bbox="1145 500 1367 644"> <thead> <tr> <th>A</th> <th>X</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> </tr> <tr> <td>1</td> <td>1</td> </tr> </tbody> </table>	A	X	0	0	1	1	$X = A$									
A	X																	
0	0																	
1	1																	
Inverter (NOT gate)		<table border="1" data-bbox="1145 726 1367 871"> <thead> <tr> <th>A</th> <th>X</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>1</td> </tr> <tr> <td>1</td> <td>0</td> </tr> </tbody> </table>	A	X	0	1	1	0	$X = \bar{A}$									
A	X																	
0	1																	
1	0																	
2 input AND gate		<table border="1" data-bbox="1099 930 1413 1176"> <thead> <tr> <th>A</th> <th>B</th> <th>X</th> </tr> </thead> <tbody> <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> </tbody> </table>	A	B	X	0	0	0	0	1	0	1	0	0	1	1	1	$Y = A \cdot B$
A	B	X																
0	0	0																
0	1	0																
1	0	0																
1	1	1																
2 input NAND gate		<table border="1" data-bbox="1099 1213 1413 1459"> <thead> <tr> <th>A</th> <th>B</th> <th>X</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1</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>0</td> </tr> </tbody> </table>	A	B	X	0	0	1	0	1	1	1	0	1	1	1	0	$X = \overline{A \cdot B}$
A	B	X																
0	0	1																
0	1	1																
1	0	1																
1	1	0																
2 input OR gate		<table border="1" data-bbox="1099 1496 1413 1742"> <thead> <tr> <th>A</th> <th>B</th> <th>X</th> </tr> </thead> <tbody> <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> </tbody> </table>	A	B	X	0	0	0	0	1	1	1	0	1	1	1	1	$X = A + B$
A	B	X																
0	0	0																
0	1	1																
1	0	1																
1	1	1																
2 input NOR gate		<table border="1" data-bbox="1099 1778 1413 2024"> <thead> <tr> <th>A</th> <th>B</th> <th>X</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1</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>0</td> </tr> </tbody> </table>	A	B	X	0	0	1	0	1	0	1	0	0	1	1	0	$X = \overline{A + B}$
A	B	X																
0	0	1																
0	1	0																
1	0	0																
1	1	0																
2 input EX-OR gate		<table border="1" data-bbox="1099 2061 1413 2307"> <thead> <tr> <th>A</th> <th>B</th> <th>X</th> </tr> </thead> <tbody> <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>0</td> </tr> </tbody> </table>	A	B	X	0	0	0	0	1	1	1	0	1	1	1	0	$X = A \oplus B$
A	B	X																
0	0	0																
0	1	1																
1	0	1																
1	1	0																
2 input EX-NOR gate		<table border="1" data-bbox="1099 2344 1413 2590"> <thead> <tr> <th>A</th> <th>B</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>1</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> </tbody> </table>	A	B	Y	0	0	1	0	1	0	1	0	0	1	1	1	$X = \overline{A \oplus B}$
A	B	Y																
0	0	1																
0	1	0																
1	0	0																
1	1	1																