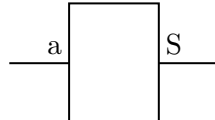
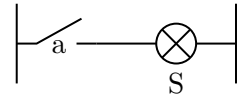
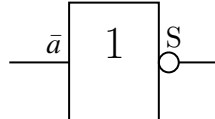
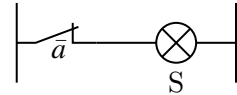
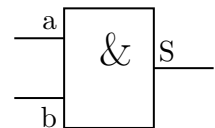
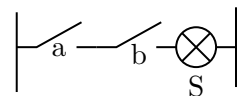
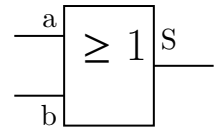
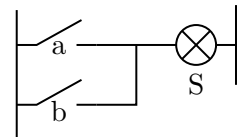
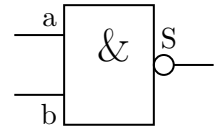
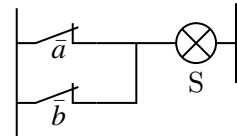
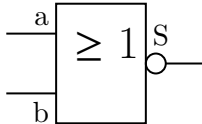
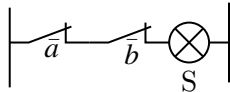
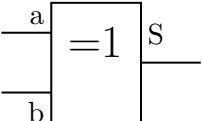
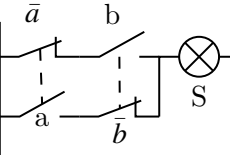
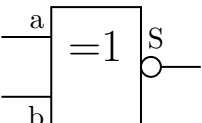
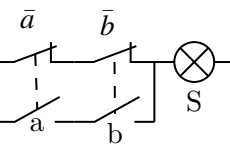


Équation logique	Table de vérité	Identité remarquable	Propriété	Symbole	Schéma															
Fonction OUI																				
$S = a$	<table><tr><td>a</td><td>S</td></tr><tr><td>0</td><td>0</td></tr><tr><td>1</td><td>1</td></tr></table>	a	S	0	0	1	1													
a	S																			
0	0																			
1	1																			
Fonction NON																				
$S = \bar{a}$	<table><tr><td>a</td><td>S</td></tr><tr><td>0</td><td>1</td></tr><tr><td>1</td><td>0</td></tr></table>	a	S	0	1	1	0													
a	S																			
0	1																			
1	0																			
Fonction ET																				
$S = a \cdot b$	<table><tr><td>a</td><td>b</td><td>S</td></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	S	0	0	0	0	1	0	1	0	0	1	1	1	<ul style="list-style-type: none">– commutative ;– associative ;– distributive.	<p>élément neutre : $a \cdot 1 = a$</p> <p>élément absorbant : $a \cdot 0 = 0$</p> <p>idempotence : $a \cdot a = a$</p> <p>complément : $a \cdot \bar{a} = 0$</p>		
a	b	S																		
0	0	0																		
0	1	0																		
1	0	0																		
1	1	1																		
Fonction OU																				
$S = a + b$	<table><tr><td>a</td><td>b</td><td>S</td></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	S	0	0	0	0	1	1	1	0	1	1	1	1	<ul style="list-style-type: none">– commutative ;– associative ;– distributive.	<p>élément neutre : $a + 1 = a$</p> <p>élément absorbant : $a + 1 = 1$</p> <p>idempotence : $a + a = a$</p> <p>complément : $a + \bar{a} = 1$</p>		
a	b	S																		
0	0	0																		
0	1	1																		
1	0	1																		
1	1	1																		
Fonction NAND (NON-ET)																				
$S = \overline{a \cdot b}$	<table><tr><td>a</td><td>b</td><td>S</td></tr><tr><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td></tr></table>	a	b	S	0	0	1	0	1	1	<ul style="list-style-type: none">– commutative.	<ul style="list-style-type: none">– $\overline{a \cdot 1} = \bar{a}$– $\overline{a \cdot 0} = 1$– $\overline{a \cdot a} = \bar{a}$– $\overline{a \cdot \bar{a}} = 0$								
a	b	S																		
0	0	1																		
0	1	1																		
$S = \bar{a} \cdot \bar{b}$	<table><tr><td>a</td><td>b</td><td>S</td></tr><tr><td>0</td><td>0</td><td>1</td></tr><tr><td>0</td><td>1</td><td>1</td></tr></table>	a	b	S	0	0	1	0	1	1										
a	b	S																		
0	0	1																		
0	1	1																		

Équation logique	Table de vérité	Identité remarquable	Propriété	Symbole	Schéma															
	<table><tr><td>1</td><td>0</td><td>1</td></tr><tr><td>1</td><td>1</td><td>0</td></tr></table>	1	0	1	1	1	0													
1	0	1																		
1	1	0																		
Fonction NOR (NON-OU)																				
$S = \overline{a/b}$	<table><tr><td>a</td><td>b</td><td>S</td></tr><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></table>	a	b	S	0	0	1	0	1	0	1	0	0	1	1	0	- commutative.	<ul style="list-style-type: none">- $\overline{a+1} = 0$- $\overline{a+0} = \bar{a}$- $\overline{a+a} = \bar{a}$- $\overline{a+\bar{a}} = 0$		
a	b	S																		
0	0	1																		
0	1	0																		
1	0	0																		
1	1	0																		
$S = \bar{a} \cdot \bar{b}$																				
Fonction XOR																				
$S = a \oplus b$	<table><tr><td>a</td><td>b</td><td>S</td></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>0</td></tr></table>	a	b	S	0	0	0	0	1	1	1	0	1	1	1	0	<ul style="list-style-type: none">- commutative ;- associative	<ul style="list-style-type: none">- $a \oplus 1 = \bar{a}$- $a \oplus 0 = a$- $a \oplus a = 0$- $a \oplus \bar{a} = 1$		
a	b	S																		
0	0	0																		
0	1	1																		
1	0	1																		
1	1	0																		
$S = \bar{a} \cdot b + a \cdot \bar{b}$																				
Fonction XNOR																				
$S = a \odot b$	<table><tr><td>a</td><td>b</td><td>S</td></tr><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></table>	a	b	S	0	0	1	0	1	0	1	0	0	1	1	1	- commutative.	<ul style="list-style-type: none">- $a \odot 1 = a$- $a \odot 0 = \bar{a}$- $a \odot a = 1$- $a \odot \bar{a} = 0$		
a	b	S																		
0	0	1																		
0	1	0																		
1	0	0																		
1	1	1																		
$S = \frac{a \cdot b + \bar{a} \cdot \bar{b}}{a \oplus b}$																				

TAB. 0.1 – Portes logiques