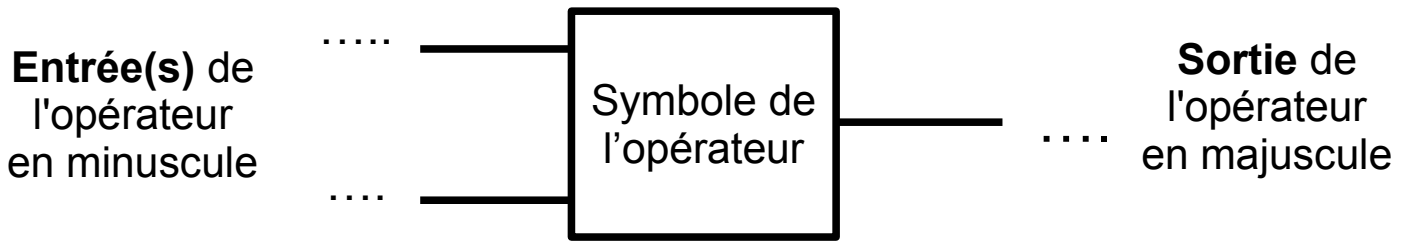


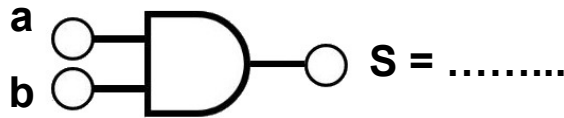
# LES FONCTIONS LOGIQUES

3°

## Représentation graphique d'une fonction logique



La fonction ET

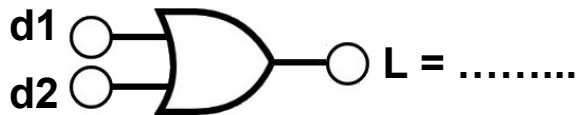


se lit .....

Schéma

Equation

La fonction OU



se lit .....

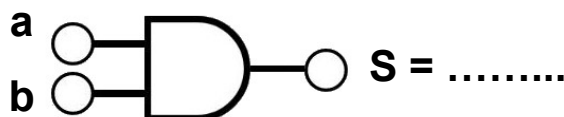
# LES FONCTIONS LOGIQUES

3°

## Représentation graphique d'une fonction logique



La fonction ET

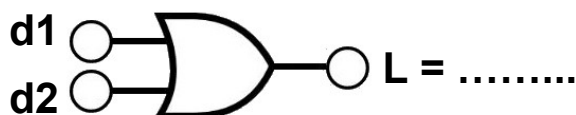


se lit .....

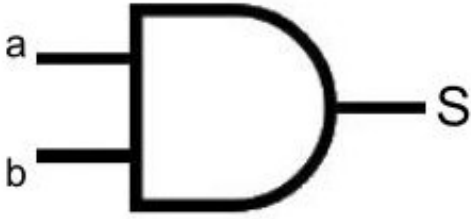
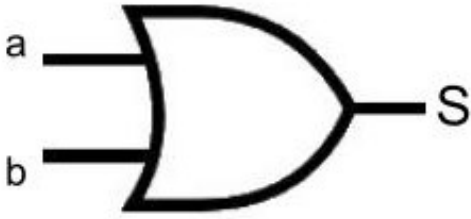
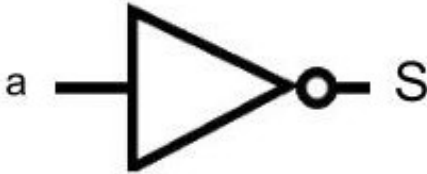
Schéma

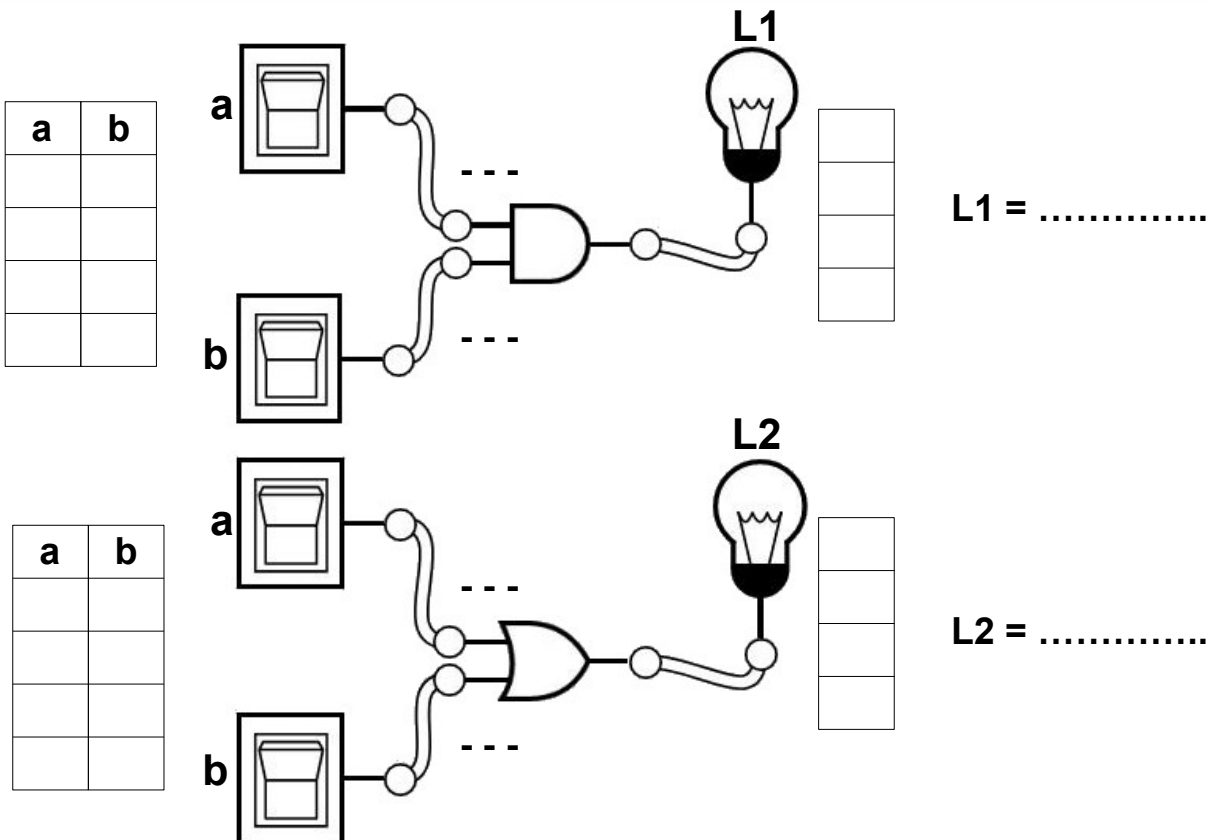
Equation

La fonction OU




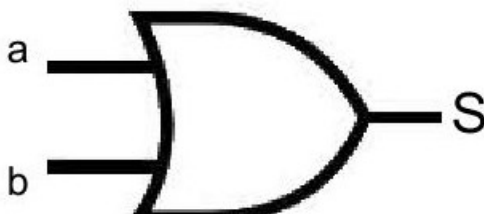
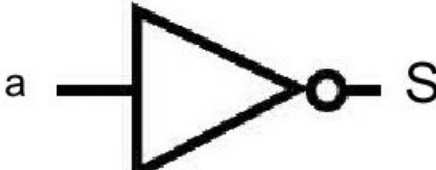
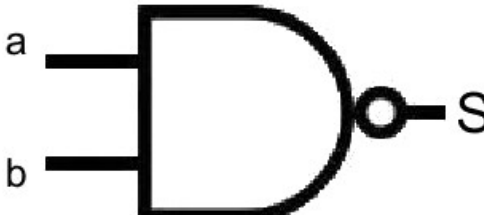

se lit .....

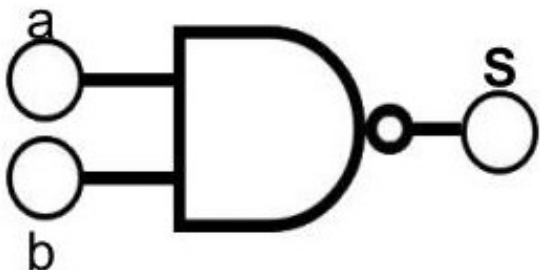
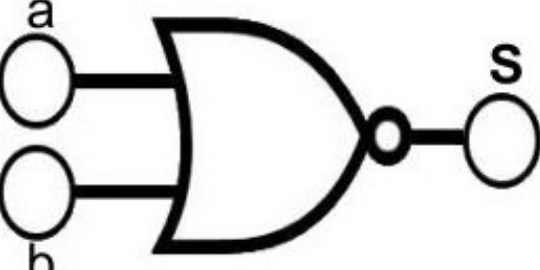
Type	Symbole américain	Opération S	Table de vérité															
ET		<p><b>S = .....</b></p> <p>(Se lit S = a et b)</p>	<table border="1"> <thead> <tr> <th>a</th> <th>b</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	a	b	S	0	0		0	1		1	0		1	1	
a	b	S																
0	0																	
0	1																	
1	0																	
1	1																	
OU		<p><b>S = .....</b></p> <p>(Se lit S = a ou b)</p>	<table border="1"> <thead> <tr> <th>a</th> <th>b</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	a	b	S	0	0		0	1		1	0		1	1	
a	b	S																
0	0																	
0	1																	
1	0																	
1	1																	
NON		<p><b>S = .....</b></p> <p>(Se lit S = a barre)</p>	<table border="1"> <thead> <tr> <th>a</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> </tbody> </table>	a	S	0		1										
a	S																	
0																		
1																		



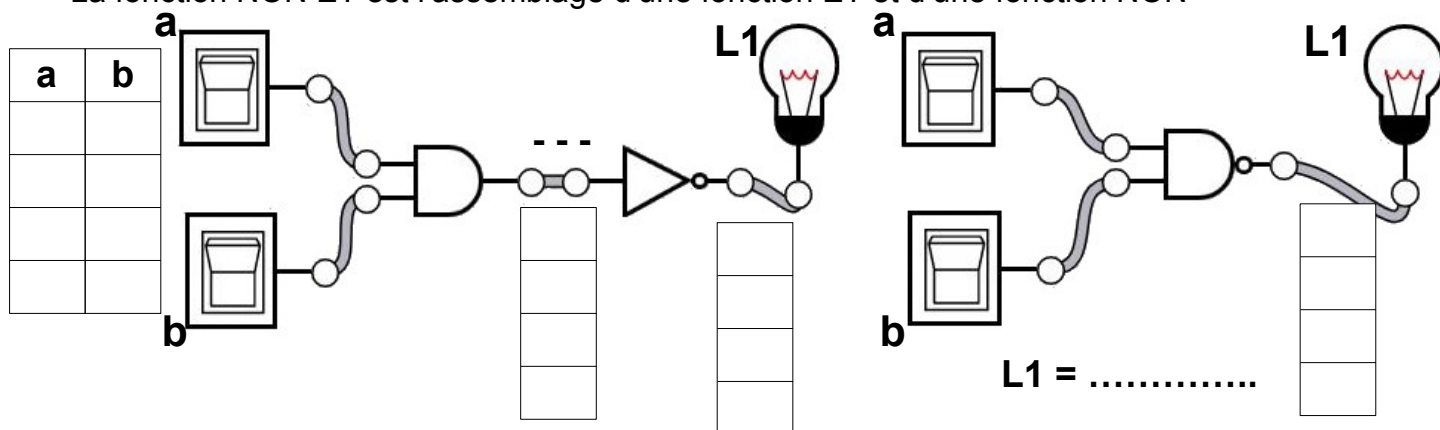
NOM :

## Fonctions logiques

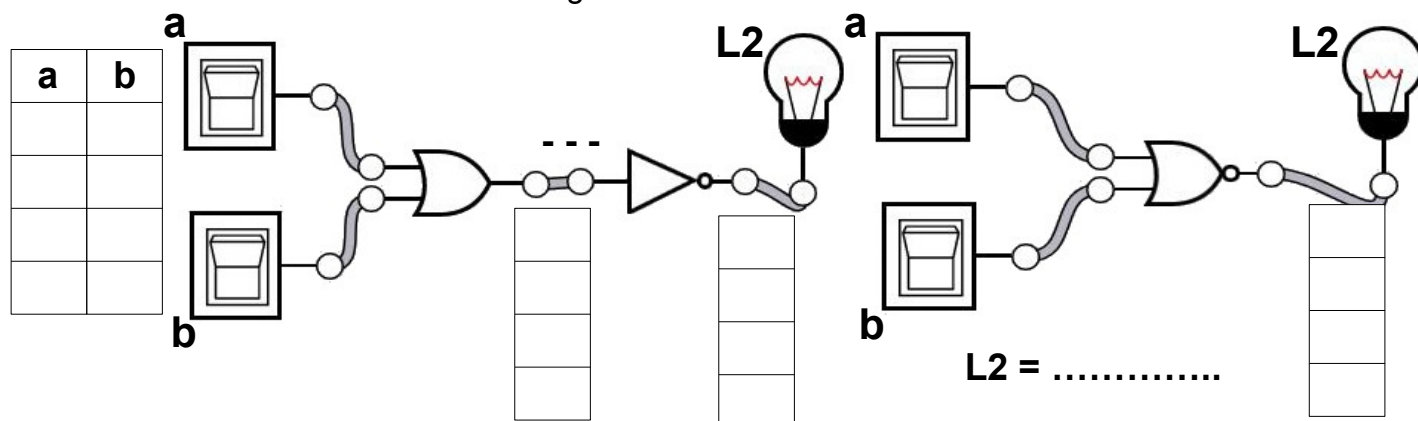
Type	Symbole américain	Opération S	Table de vérité															
<b>ET</b> = AND		$S =$	<table border="1"> <thead> <tr> <th>a</th> <th>b</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	a	b	S	0	0		0	1		1	0		1	1	
a	b	S																
0	0																	
0	1																	
1	0																	
1	1																	
<b>OU</b> = OR		$S =$	<table border="1"> <thead> <tr> <th>a</th> <th>b</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	a	b	S	0	0		0	1		1	0		1	1	
a	b	S																
0	0																	
0	1																	
1	0																	
1	1																	
<b>NON</b> = NOT		$S =$	<table border="1"> <thead> <tr> <th>a</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td></td> </tr> </tbody> </table>	a	S	0		1										
a	S																	
0																		
1																		
<b>NON-ET</b> = NAND		$S =$	<table border="1"> <thead> <tr> <th>a</th> <th>b</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	a	b	S	0	0		0	1		1	0		1	1	
a	b	S																
0	0																	
0	1																	
1	0																	
1	1																	
<b>NON-OU</b> = NOR		$S =$	<table border="1"> <thead> <tr> <th>a</th> <th>b</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td></td> </tr> <tr> <td>0</td> <td>1</td> <td></td> </tr> <tr> <td>1</td> <td>0</td> <td></td> </tr> <tr> <td>1</td> <td>1</td> <td></td> </tr> </tbody> </table>	a	b	S	0	0		0	1		1	0		1	1	
a	b	S																
0	0																	
0	1																	
1	0																	
1	1																	

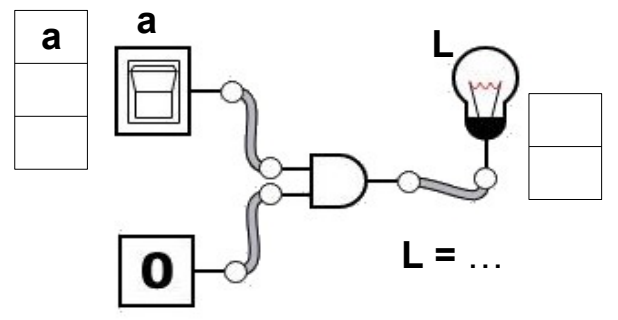
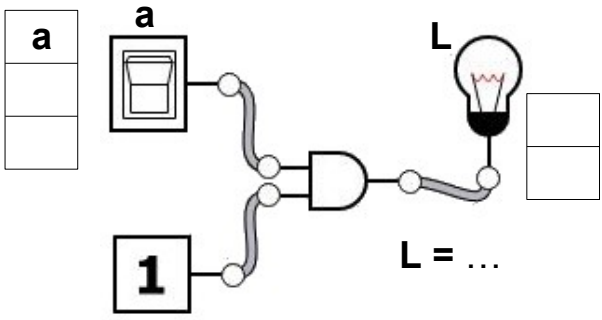
Type	Symbole américain	Opération S	Table de vérité															
NON ET = NAND		<b>S =</b> ..... (Se lit $S = a \text{ et } b \text{ barre}$ )	<table border="1"> <thead> <tr> <th>a</th> <th>b</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>...</td> </tr> <tr> <td>0</td> <td>1</td> <td>...</td> </tr> <tr> <td>1</td> <td>0</td> <td>...</td> </tr> <tr> <td>1</td> <td>1</td> <td>...</td> </tr> </tbody> </table>	a	b	S	0	0	...	0	1	...	1	0	...	1	1	...
a	b	S																
0	0	...																
0	1	...																
1	0	...																
1	1	...																
NON OU = NOR		<b>S =</b> ..... (Se lit $S = a \text{ ou } b \text{ barre}$ )	<table border="1"> <thead> <tr> <th>a</th> <th>b</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>0</td> <td>...</td> </tr> <tr> <td>0</td> <td>1</td> <td>...</td> </tr> <tr> <td>1</td> <td>0</td> <td>...</td> </tr> <tr> <td>1</td> <td>1</td> <td>...</td> </tr> </tbody> </table>	a	b	S	0	0	...	0	1	...	1	0	...	1	1	...
a	b	S																
0	0	...																
0	1	...																
1	0	...																
1	1	...																

La fonction NON ET est l'assemblage d'une fonction ET et d'une fonction NON



La fonction NON OU est l'assemblage d'une fonction OU et d'une fonction NON





Octet de départ : 1 0 1 1 0 1 1 0

ET masque : 0 0 0 0 1 1 1 1

Résultat : \_ \_ \_ \_ \_

Octet de départ : 1 0 1 0 0 1 1 1

ET masque : 0 0 0 0 0 0 0 1

Résultat : \_ \_ \_ \_ \_

Octet de départ : 0 0 1 1 1 1 0 1

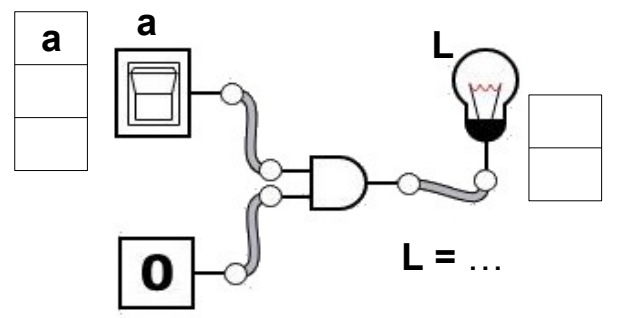
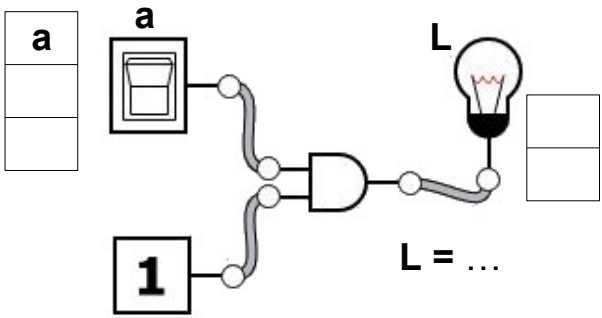
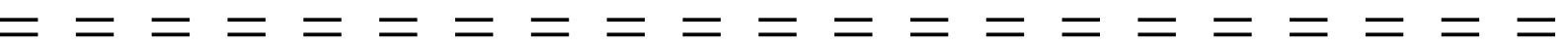
ET masque : 1 1 1 1 0 0 0 0

Résultat : \_ \_ \_ \_ \_

Octet de départ : 0 0 1 1 1 1 0 1

ET masque : 1 0 1 0 1 0 1 0

Résultat : \_ \_ \_ \_ \_



Octet de départ : 1 0 1 1 0 1 1 0

ET masque : 0 0 0 0 1 1 1 1

Résultat : \_ \_ \_ \_ \_

Octet de départ : 1 0 1 0 0 1 1 1

ET masque : 0 0 0 0 0 0 0 1

Résultat : \_ \_ \_ \_ \_

Octet de départ : 0 0 1 1 1 1 0 1

ET masque : 1 1 1 1 0 0 0 0

Résultat : \_ \_ \_ \_ \_

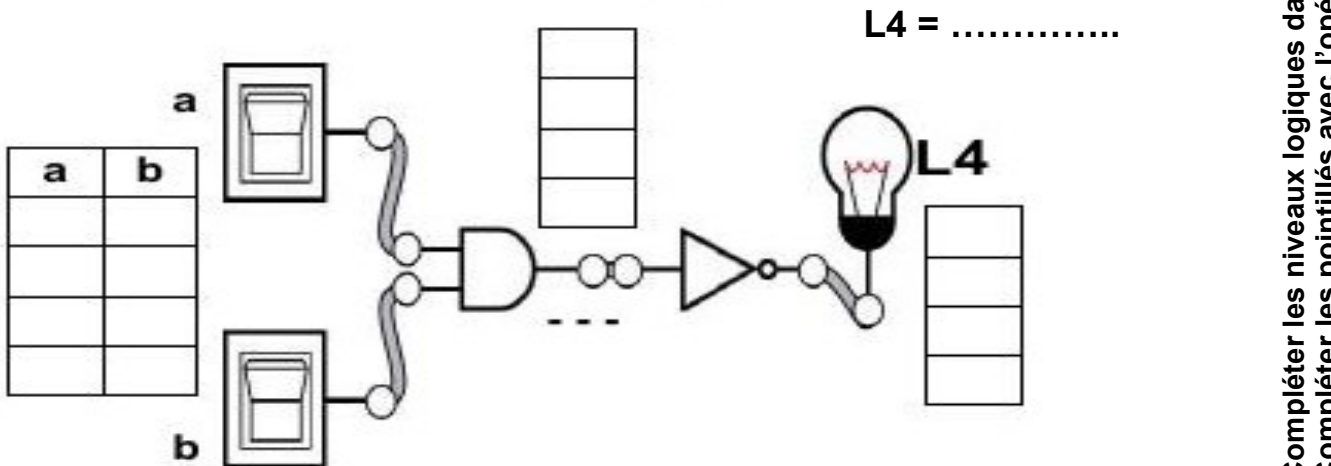
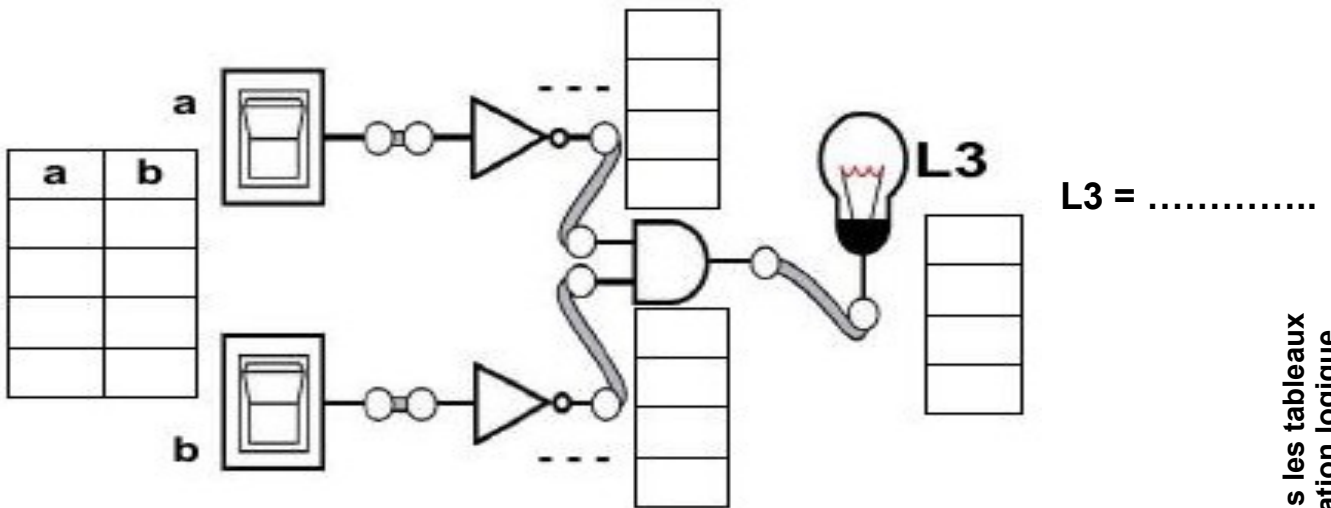
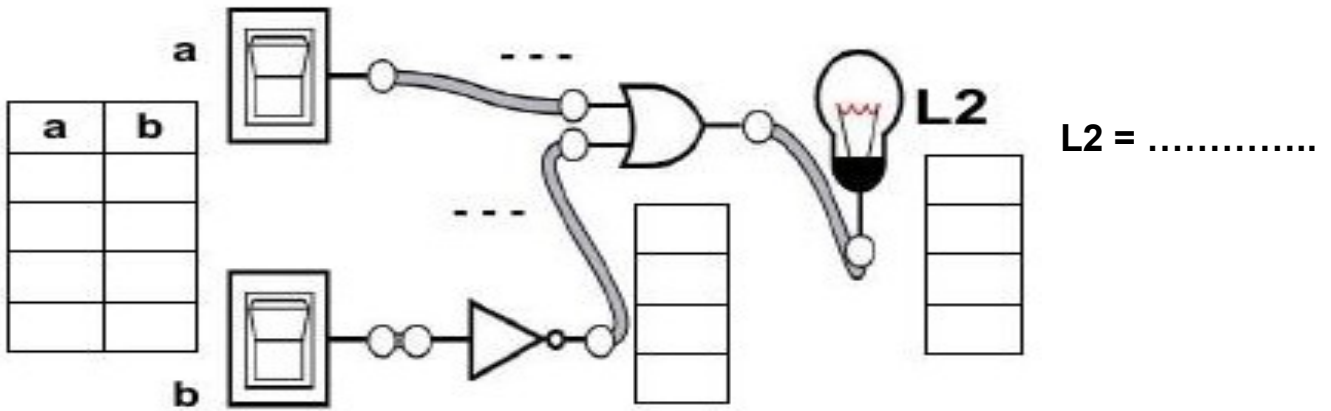
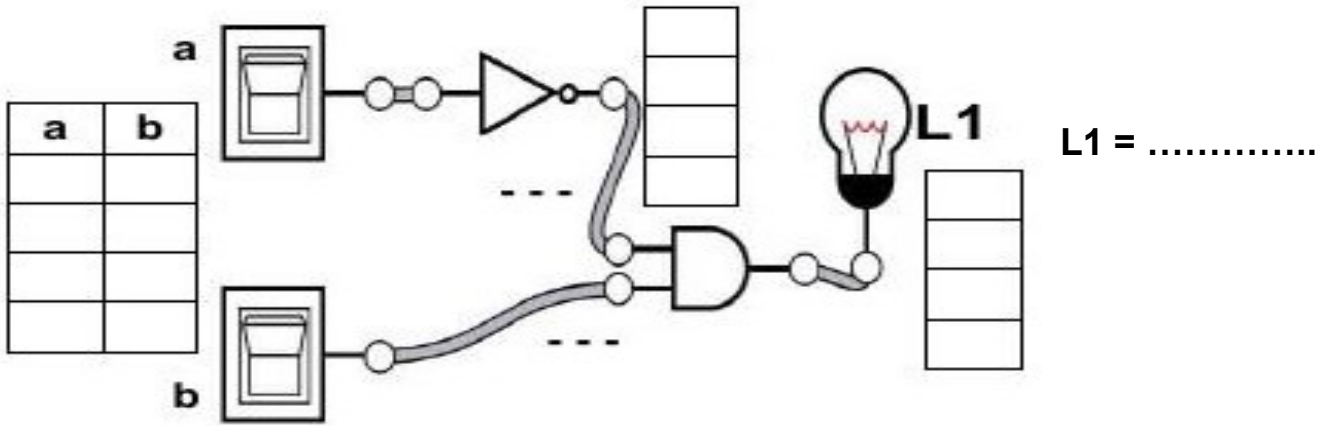
Octet de départ : 0 0 1 1 1 1 0 1

ET masque : 1 0 1 0 1 0 1 0

Résultat : \_ \_ \_ \_ \_

NOM :

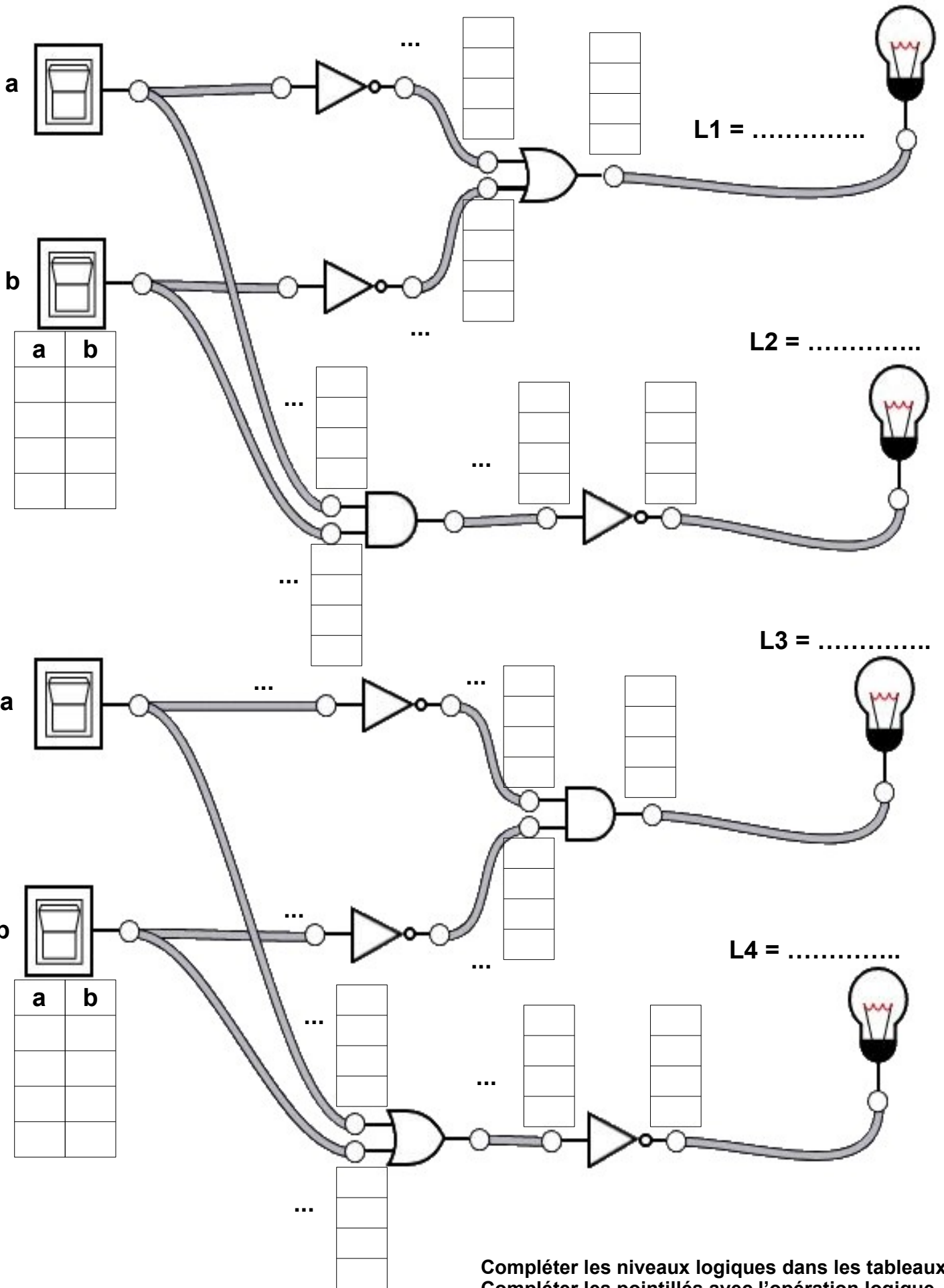
# Exemples 1 de fonctions logiques



Compléter les niveaux logiques dans les tableaux  
Compléter les pointillés avec l'opération logique  
En déduire l'opération logique pour chaque lampe

NOM :

# Exemples 2 de fonctions logiques



Compléter les niveaux logiques dans les tableaux  
Compléter les pointillés avec l'opération logique  
En déduire l'opération logique pour chaque lampe