Informatique *TP*
Logique Ipesup

1 Exercice

Simplify the expression for the following truth table.

A	B	Y
0	0	1
0	1	0
1	0	1
1	1	0

is equal to

1. $\overline{A}$
2. $\overline{A} + B$
3. $\overline{B}$
4. $\overline{A} + \overline{B}$

2 Exercice

Simplify the expression

$$Y(A, B) = \prod_{M}(1, 3).$$

1. $\overline{A}$
2. $\overline{B}$
3. $\overline{A} + B$
4. $\overline{A} + \overline{B}$

3 Exercice

The minimized form of the logical expression

$$(\overline{A}\,\overline{B}\,\overline{C} + \overline{A}B\overline{C} + \overline{A}BC + AB\overline{C})$$

is

1. $\overline{A}C + B\overline{C} + \overline{A}B$
2. $A\overline{C} + BC + \overline{A}B$
3. $\overline{A}C + BC + \overline{A}B$
4. $A\overline{C} + \overline{B}C + \overline{A}B$

4 Exercice

If X and Y are Boolean variables, which one of the following is the equivalent of

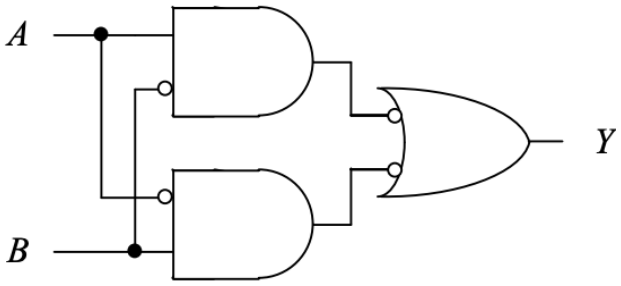
$$X \oplus Y \oplus XY?$$

1. $X + \overline{Y}$
2. $X + Y$
3. 0
4. 1

5 Exercice

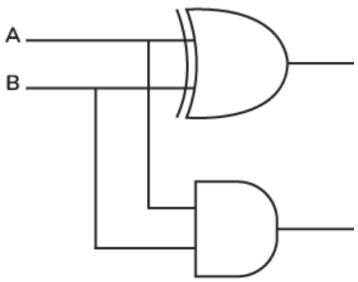
The equation for the output of logic gates below is :

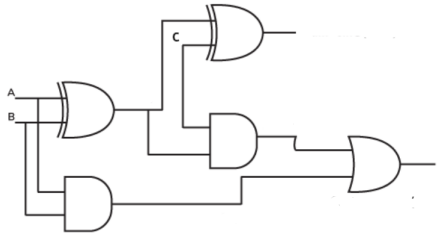
1. $Y = AB$
2. $Y = A\overline{B} + \overline{A}B$
3. $Y = \overline{A}B$
4. $Y = AB + \overline{A}B$

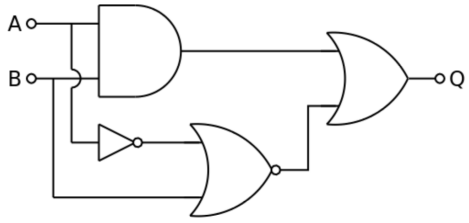


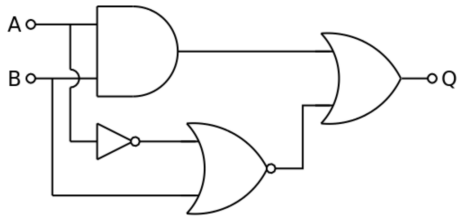
6 Exercice

Établir la table de vérité des circuits logiques suivants.

1. 

2. 

3. 

4. 

5.