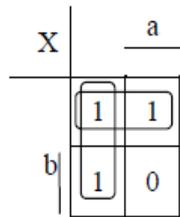


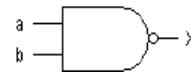
Corrigé type des travaux dirigés N°2

Exercice N°1

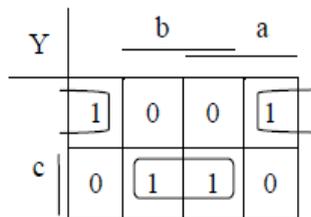
b	a	X
0	0	1
0	1	1
1	0	1
1	1	0



$$X = \bar{a} + \bar{b} = \overline{ab}$$



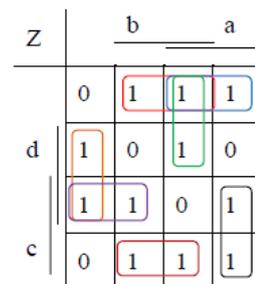
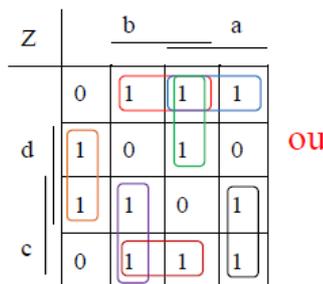
c	b	a	Y
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	1



$$Y = bc + \bar{b}\bar{c} = \overline{b \oplus c}$$



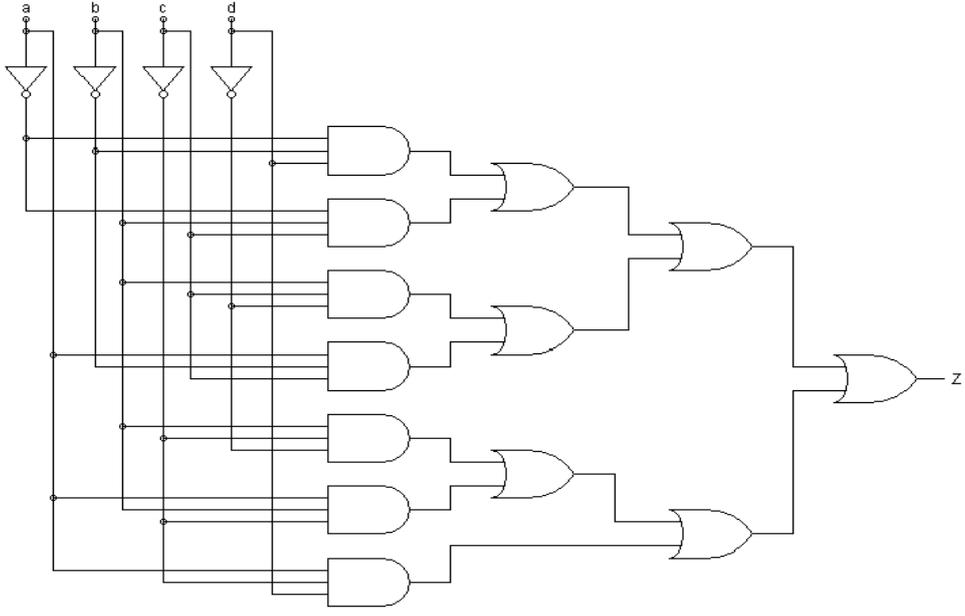
d	c	b	a	Z
0	0	0	0	0
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	0
0	1	0	1	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	1
1	0	0	1	0
1	0	1	0	0
1	0	1	1	1
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0



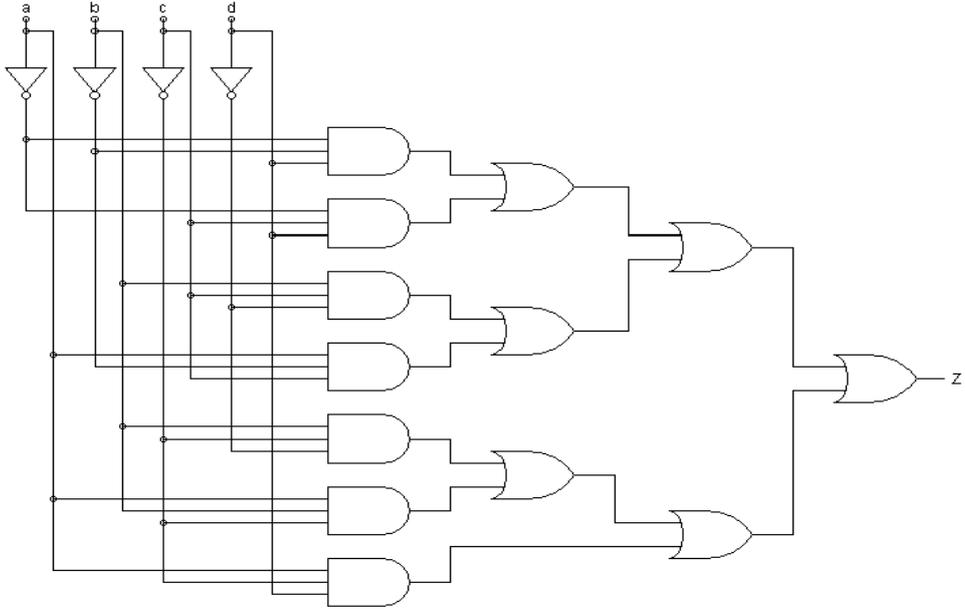
ou

$$Z = \bar{a}\bar{b}d + \bar{a}bc + b\bar{c}\bar{d} + a\bar{b}c + b\bar{c}\bar{d} + abc + a\bar{c}\bar{d}$$

$$Z = \bar{a}\bar{b}d + \bar{a}cd + b\bar{c}\bar{d} + a\bar{b}c + b\bar{c}\bar{d} + abc + a\bar{c}\bar{d}$$



ou



Exercice N°2

$$F1 = a.b\bar{c} + \bar{a}.b.c + a.\bar{b}.\bar{c} + a.\bar{b}.c$$

F1	b		a	
	0	0	1	1
c	1	0	0	1

$$F1 = a\bar{c} + \bar{b}c$$

$$F2 = a.b.c + \bar{a}.b.c + \bar{a}.\bar{b}.c + a.b.\bar{c}$$

F2	b		a	
	0	0	1	0
c	1	1	1	0

$$F2 = ab + \bar{a}c$$

$$F3 = \bar{a}.\bar{b}.c.\bar{d} + \bar{a}.b.\bar{c}.\bar{d} + a.\bar{b}.c.\bar{d} + \bar{a}.\bar{b}.\bar{c}.\bar{d} + a.b.\bar{c}.\bar{d} + \bar{a}.b.c.d + a.\bar{b}.c.d + a.\bar{b}.\bar{c}.\bar{d}$$

F3	b		a	
	1	0	0	1
d	0	1	1	0
	0	1	0	0
c	1	0	0	1

$$F3 = \bar{a}bd + b\bar{c}d + \bar{b}\bar{d}$$

$$F4 = \bar{a}.\bar{b}.\bar{c}.\bar{d} + \bar{a}.\bar{b}.\bar{c}.d + \bar{a}.\bar{b}.c.\bar{d} + \bar{a}.\bar{b}.c.d + a.b.\bar{c}.\bar{d} + a.b.c.\bar{d} + a.\bar{b}.\bar{c}.\bar{d} + a.\bar{b}.c.\bar{d} + a.\bar{b}.c.d$$

F4	b		a	
	1	0	0	0
d	1	0	1	1
	1	0	1	1
c	1	0	0	1

$$F4 = \bar{a}\bar{b} + ad + \bar{a}bc$$

Ou $F4 = \bar{a}\bar{b} + ad + \bar{b}c$.