

Devoir 1

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(a) Table de vérité

	A	B	C	D	V
0	0	0	0	0	0
1	0	0	0	1	0
2	0	0	1	0	0
3	0	0	1	1	0
4	0	1	0	0	0
5	0	1	0	1	0
6	0	1	1	0	1
7	0	1	1	1	1
8	1	0	0	0	0
9	1	0	0	1	0
10	1	0	1	0	1
11	1	0	1	1	1
12	1	1	0	0	1
13	1	1	0	1	1
14	1	1	1	0	1
15	1	1	1	1	1

(b) SOP de la fonction V

Initial Setup				
Minterm	A	B	C	D
—	—	—	—	—
m6	0	1	1	0
m10	1	0	1	0
m12	1	1	0	0
m7	0	1	1	1
m11	1	0	1	1
m13	1	1	0	1
m14	1	1	1	0
m15	1	1	1	1

First Reduction			
A	B	C	D
0	1	1	-
1	0	1	-
1	1	0	-
1	1	1	-

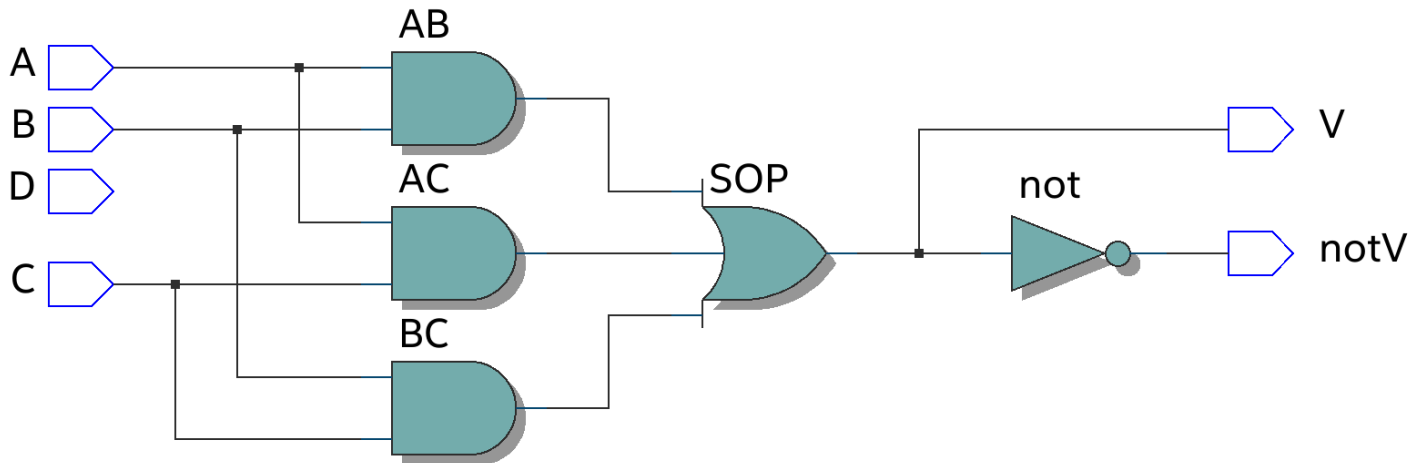
Second Reduction			
A	B	C	D
1	-	1	- *
-	1	1	- *
1	1	-	- *

Prime Implicants	Minterms							
	0110	0111	1010	1011	1100	1101	1110	1111
1-1-			✓	✓			✓	✓
-11-	✓	✓					✓	✓
11-					✓	✓	✓	✓

$$V(A, B, C, D) = AC + BC + AB$$

(c) Implementation

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