

Adatok

I	A	B	C	Y
0	0	0	0	0
1	0	0	1	0
2	0	1	0	0
3	0	1	1	1
4	1	0	0	0
5	1	0	1	1
6	1	1	0	1
7	1	1	1	1

$\bar{A}BC$

$A\bar{B}C$

$AB\bar{C}$

ABC

$$Y = \bar{A}BC + A\bar{B}C + AB\bar{C} + ABC$$

$$Y_{\text{minisz}} = AB + BC + AC$$

DISZJUNKTIV

$$Y = (A+B+C)(A+\bar{B}+\bar{C})(\bar{A}+B+\bar{C})(\bar{A}+\bar{B}+C)$$

$$\text{Egyszerűsített: } Y_{\text{min.konj.}} = (A+B)(A+C)(B+C)$$

Összes / Miniterm: \sum_1

Szorzás / Maxterm: \prod

Handwritten Karnaugh map for a 4-variable function with variables A, B, C, and D. The map shows a 4x4 grid with minterms 110, 100, 010, 000, 111, 101, 011, and 001 circled. A group of four 1s is circled in the top row (A=1), and a group of four 1s is circled in the left column (B=0). The bottom row (A=0) and right column (B=1) are empty.

A \ BC	00	01	11	10
1	000	010	100	110
0	001	011	101	111

Groupings:

- Group 1: $\overline{A} \cdot \overline{B}$ (Covers minterms 000, 001, 010, 011)
- Group 2: $A \cdot \overline{B}$ (Covers minterms 100, 101, 110, 111)

Final simplified expression: $\overline{A} \cdot \overline{B} + A \cdot \overline{B}$

BC	00	01	11	10
00	0000	0001	0011	0010
01	0100	0101	0111	0110
11	1100	1101	1111	1110
10	1000	1001	1011	1010

B	0	1
A	$\bar{A}\bar{B}$	$\bar{A}B$
1	$A\bar{B}$	AB

B	0	1
A	00	01
1	10	11

BC	00	01	11	10
A	000	001	011	010
0	$\bar{A}\bar{B}\bar{C}$	$\bar{A}\bar{B}C$	$\bar{A}B\bar{C}$	$\bar{A}BC$
1	100	101	111	110
2	$A\bar{B}\bar{C}$	$A\bar{B}C$	$AB\bar{C}$	ABC

$$Y = \bar{A}B\bar{C} + \bar{A}BC$$

$$Y = \sum^3(2,3)$$

$$Y = \sum^3(0,2,4,5,6)$$

BC	00	01	11	10
A	00	01	11	10
0	0	1	1	1
1	1	1	1	1

BC	00	01	11	10
A	0	1	1	1
0	0	1	1	1
1	0	0	0	0

ABC
0 1 1
0 1 1
0 1 1
A B