



VERTICAL LINES $\rightarrow 0$



HORIZONTAL LINES $\rightarrow 1$

0 IF LED IS WHITE

1 IF LED IS BLACK

ROW-WISE FROM TOP-LEFT

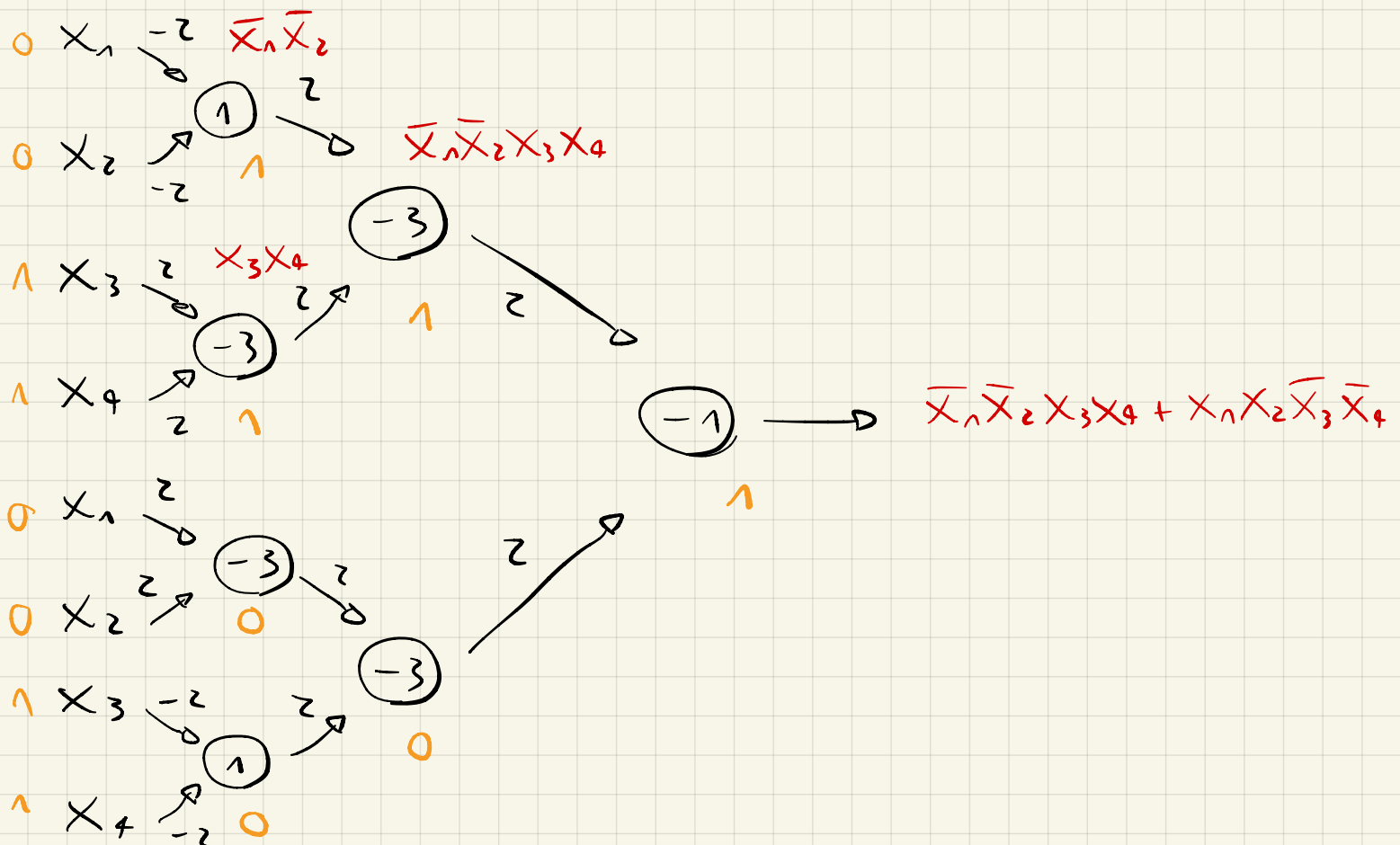
x_1	x_2
x_3	x_4

x_1	x_2	x_3	x_4	y
0	0	1	1	1
0	1	0	1	0
1	0	1	0	0
1	1	0	0	1

$2 \times 4 \cdot 4 \times 1$

$$\bar{x}_1 \bar{x}_2 x_3 x_4 + x_1 x_2 \bar{x}_3 \bar{x}_4$$

S.o.P.



or, I can even reduce this to

$$X_1 X_2 + X_3 X_4$$

$$2 \times 4 \cdot 4 \times 1 + 2 \times 1$$

