

- 1) Find the sum of product (çarpımlar toplamı) representation of the Boolean function for x and y outputs defined by the truth table given below.
- 2) Find the optimized representation of the Boolean functions you found in (1) by using Karnaugh map.
- 3) Draw the circuit of the optimized representation of the Boolean functions by using AND (VE), OR (VEYA) and NOT (TÜMLEME) gates.

Note: X values in the table indicates “don’t care” (keyfi) values.

a	b	c	d	x	y
0	0	0	0	1	1
0	0	0	1	1	1
0	0	1	0	0	1
0	0	1	1	0	X
0	1	0	0	1	1
0	1	0	1	1	0
0	1	1	0	0	1
0	1	1	1	0	X
1	0	0	0	1	0
1	0	0	1	1	1
1	0	1	0	1	X
1	0	1	1	1	1
1	1	0	0	1	0
1	1	0	1	0	X
1	1	1	0	1	1
1	1	1	1	0	0