Brukernavn: Sarime

INF 1400 OBLIG 1

Først har jag laget Sannhetsverditabellen med don't care. 7.linje er don't care.

Sannhetsverditabell

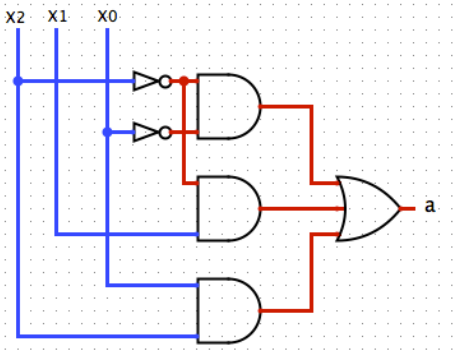
	X2	X1	X0	a	b	c	d	e	f	g
0	0	0	0	1	1	1	1	1	1	0
1	0	0	1	0	1	1	0	0	0	0
2	0	1	0	1	1	0	1	1	0	1
3	0	1	1	1	1	1	1	0	0	1
4	1	0	0	0	1	1	0	0	1	1
5	1	0	1	1	0	1	1	0	1	1
6	1	1	0	0	0	1	1	1	1	1
7	1	1	1	x	x	x	x	x	x	x

Etter på jeg har laget Karnaugh Diagram for hver diode(a,b,c,d,e,f,g) og har løst funksjonen.

For a:

Truth Tabell

	X2	X1	X0	a
0	0	0	0	1
1	0	0	1	0
2	0	1	0	1
3	0	1	1	1
4	1	0	0	0
5	1	0	1	1
6	1	1	0	0
7	1	1	1	**x**



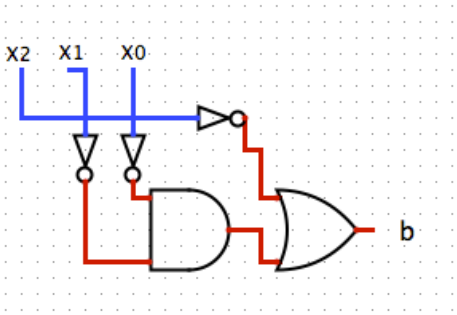
a = x2'x0' + x2'x1 + x2x0

For b:

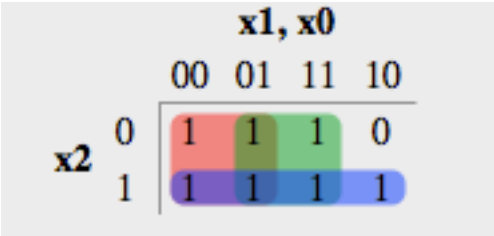
b = x2’ + x1’x0

Truth Tabell

	X2	X1	X0	b
0	0	0	0	1
1	0	0	1	1
2	0	1	0	1
3	0	1	1	1
4	1	0	0	1
5	1	0	1	0
6	1	1	0	0
7	1	1	1	**x**



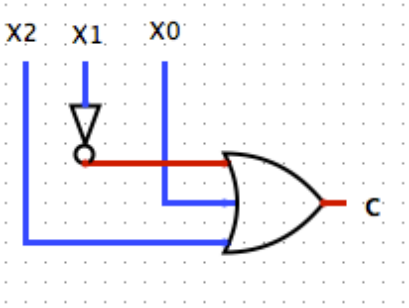
For c:



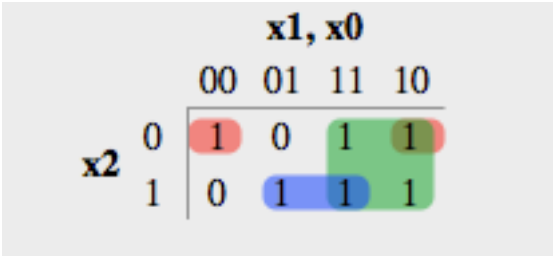
c = x1’ + x0 + x2

Truth Tabell

	X2	X1	X0	c
0	0	0	0	1
1	0	0	1	1
2	0	1	0	0
3	0	1	1	1
4	1	0	0	1
5	1	0	1	1
6	1	1	0	1
7	1	1	1	**x**



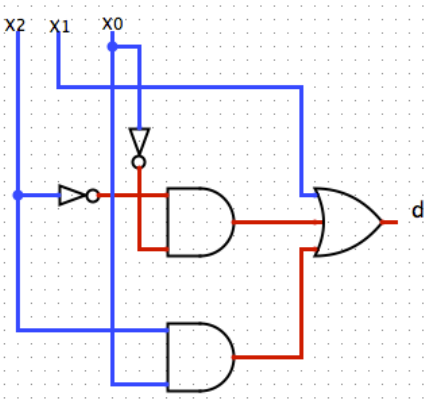
For d:



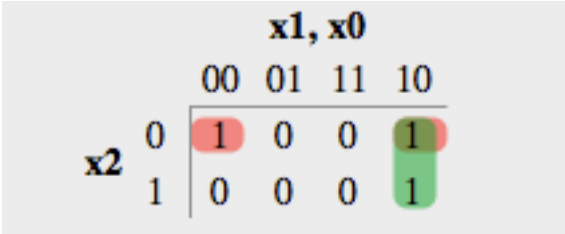
d = x2'x0' + x1 + x2x0

Truth Tabell

	X2	X1	X0	d
0	0	0	0	1
1	0	0	1	0
2	0	1	0	1
3	0	1	1	1
4	1	0	0	0
5	1	0	1	1
6	1	1	0	1
7	1	1	1	**X**



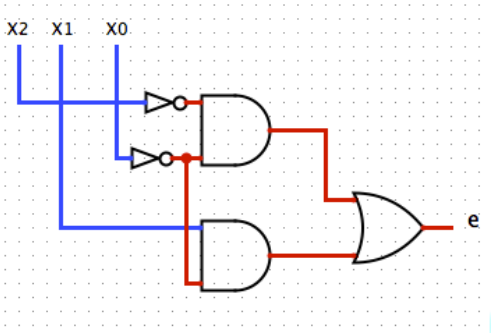
For e:



e = x2'x0' + x1x0'

Truth Tabell

	X2	X1	X0	e
0	0	0	0	1
1	0	0	1	0
2	0	1	0	1
3	0	1	1	0
4	1	0	0	0
5	1	0	1	0
6	1	1	0	1
7	1	1	1	**X**



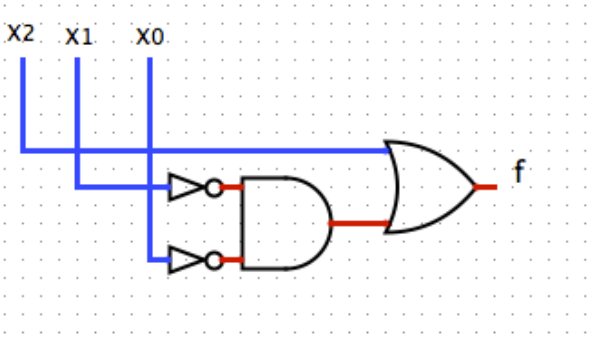
For f:

x2 \ x1, x0	00	01	11	10
0	1	0	0	0
1	1	1	1	1

f = x1'x0' + x2

Truth Tabell

	X2	X1	X0	f
0	0	0	0	1
1	0	0	1	0
2	0	1	0	0
3	0	1	1	0
4	1	0	0	1
5	1	0	1	1
6	1	1	0	1
7	1	1	1	**X**



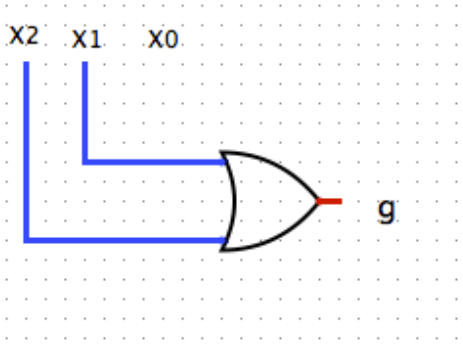
For g:

x2 \ x1, x0	00	01	11	10
0	0	0	1	1
1	1	1	1	1

g = x1 + x2

Truth Tabell

	X2	X1	X0	g
0	0	0	0	0
1	0	0	1	0
2	0	1	0	1
3	0	1	1	1
4	1	0	0	1
5	1	0	1	1
6	1	1	0	1
7	1	1	1	**X**



Etter på har jeg brukt Logisim.