

ERT - 7

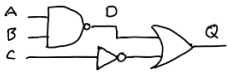
Oppg 1

Tabell 1: Sannhetstabell for NAND3

A	B	C	Q
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0

A	B	C	A · B	D	\bar{C}	Q
0	0	0	0	1	1	1
0	0	1	0	1	0	1
0	1	0	0	1	1	1
0	1	1	0	1	0	1
1	0	0	0	1	1	1
1	0	1	0	1	0	1
1	1	0	1	0	1	1
1	1	1	1	0	0	0

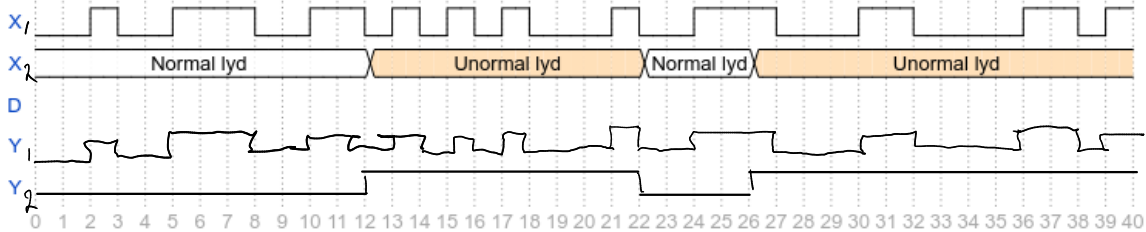
Oppgave 1 Vis at kretsen i Figur 2 er en gyldig realisering av NAND3.



Figur 2: Mulig realisering av NAND3

Du kan enten vise dette ved hjelp av boolsk algebra, eller du kan gjøre det ved å vise at kretsen oppfyller sannhetstabellen. Dersom du bruker tabell-metoden kan det være lurt å innføre en hjelpevariabel D som vist i figuren for lettere å holde orden i tankegangen.

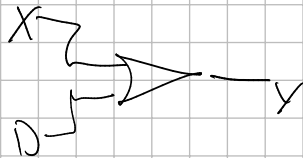
Oppg 5



Oppg 6

X	Y
0	0
1	1

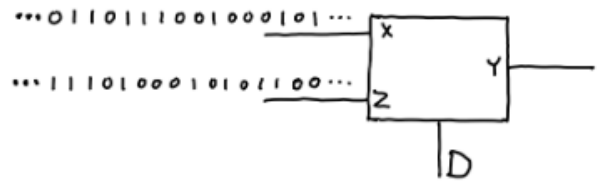
Oppg 7



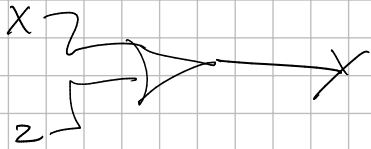
Oppg 9

x	z	x
0	0	0
0	1	1
1	0	1
1	1	1

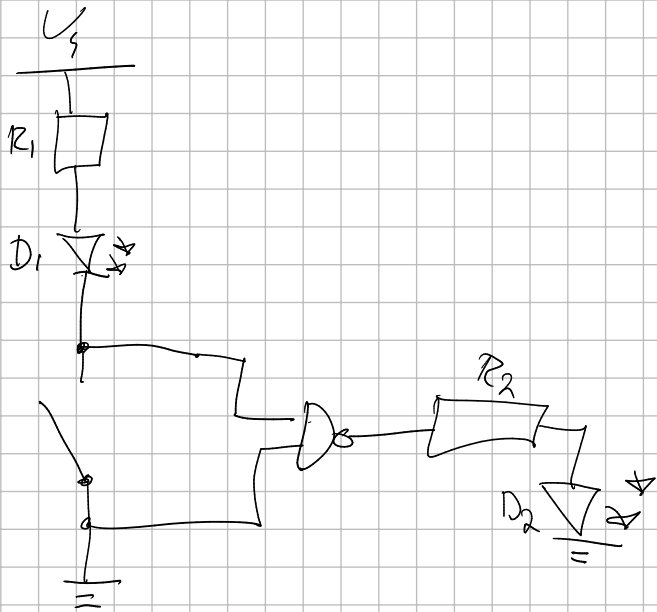
$$x + z = y$$



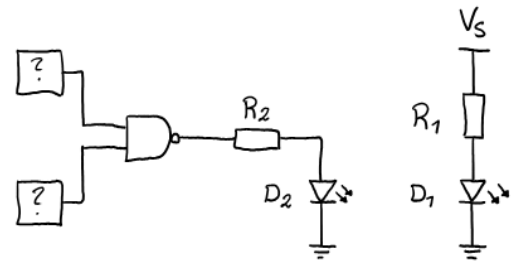
Oppg 10



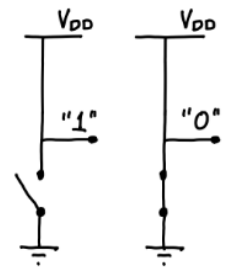
Oppg 16



Funksjon i logikk



Figur 14: Testoppsett for NAND-port.



(b)

Forsøk 2

