

Homework 2

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1) a) expansion

b) $\begin{matrix} xix\ 0 \\ xxx\ 1 \\ ix\ 1\ 0 \end{matrix} \rightarrow xiox$

$\begin{matrix} xxx\ 0 \\ xxx\ 1 \end{matrix}$

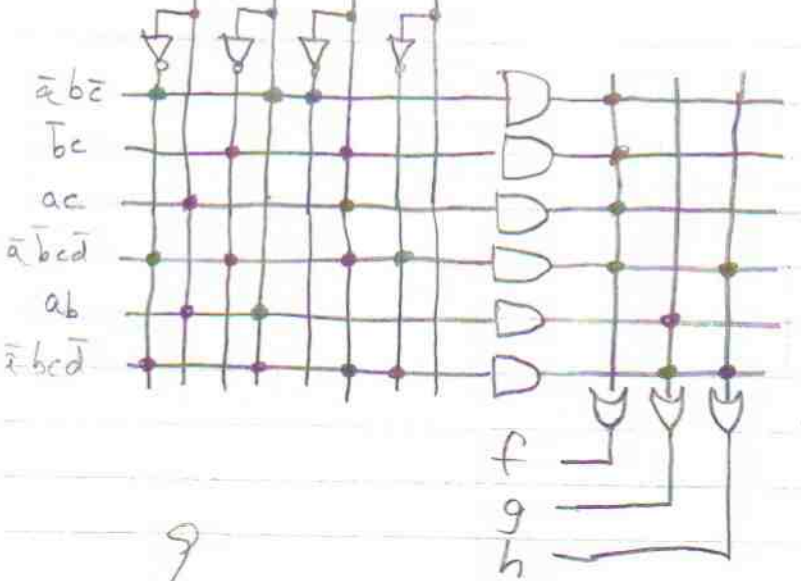


not ~~relatively~~ essential

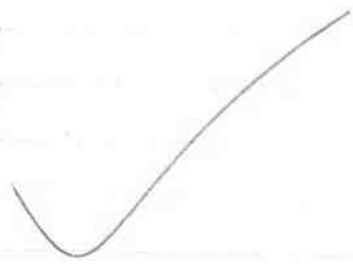
c) Yes. Once the set of cubes is cofactored, there is one ~~unique variable~~ ~~checking~~ so cofactoring by it accelerates factoring?

~~scribble~~ - |

2) a) a b c d

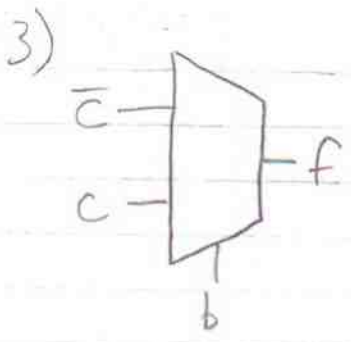


6 AND gates



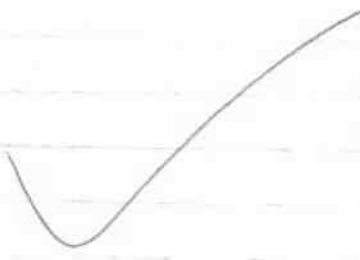
b) ~~8~~ AND gates

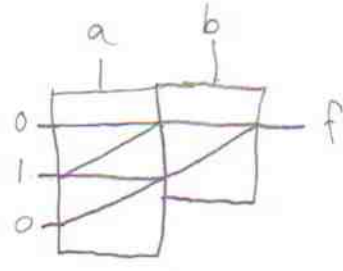
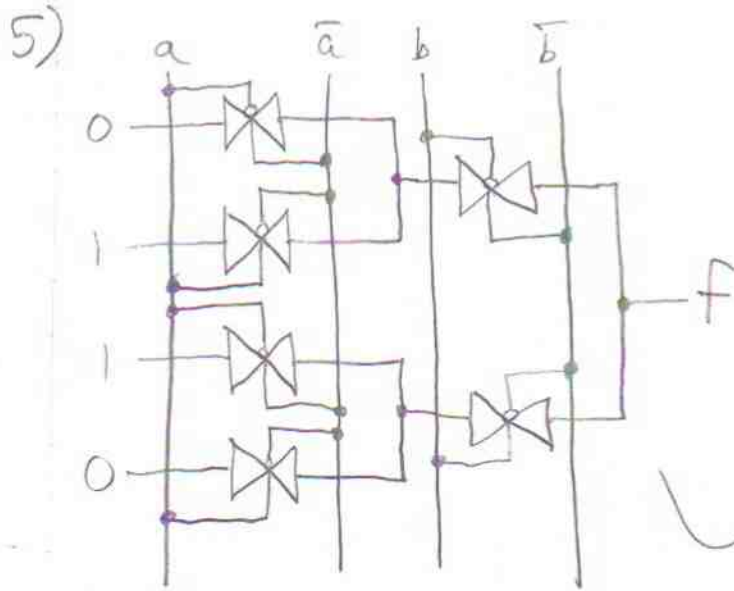
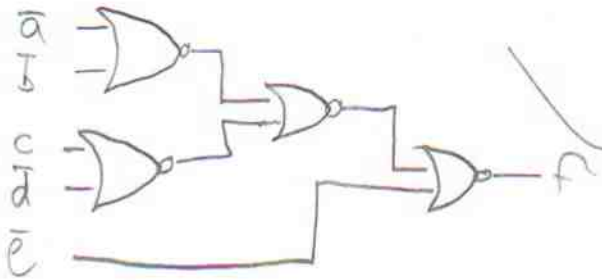
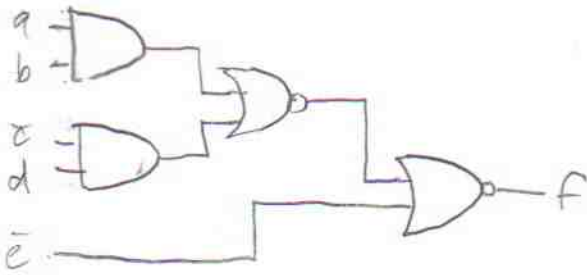
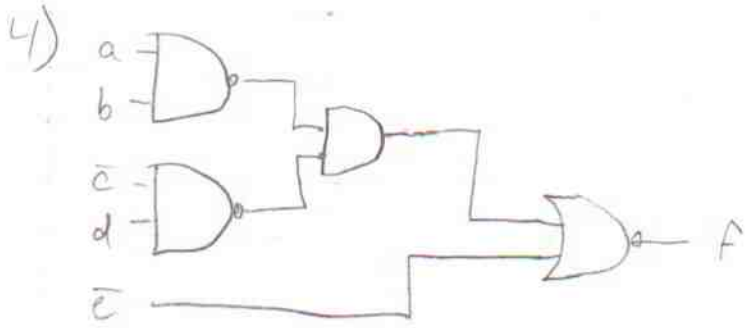
-3

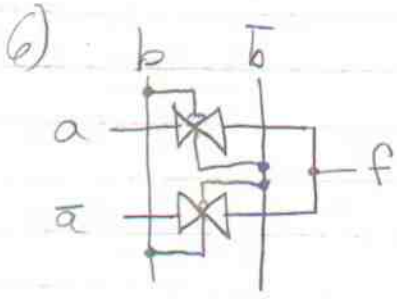


$n=2$

b	a	c	f
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	X(0)
1	0	0	X(0)
1	0	1	1
1	1	0	0
1	1	1	X(1)







2 transmission gates

A large handwritten checkmark is drawn to the right of the text, indicating that the circuit is a correct implementation of the function.