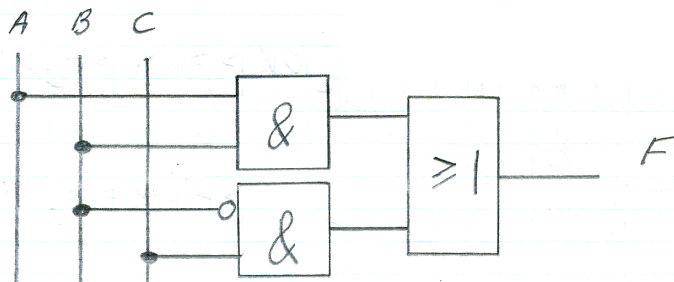


Lösningsförslag till dugga 2 i TMEL53 Digitalteknik M 2012-02-03.

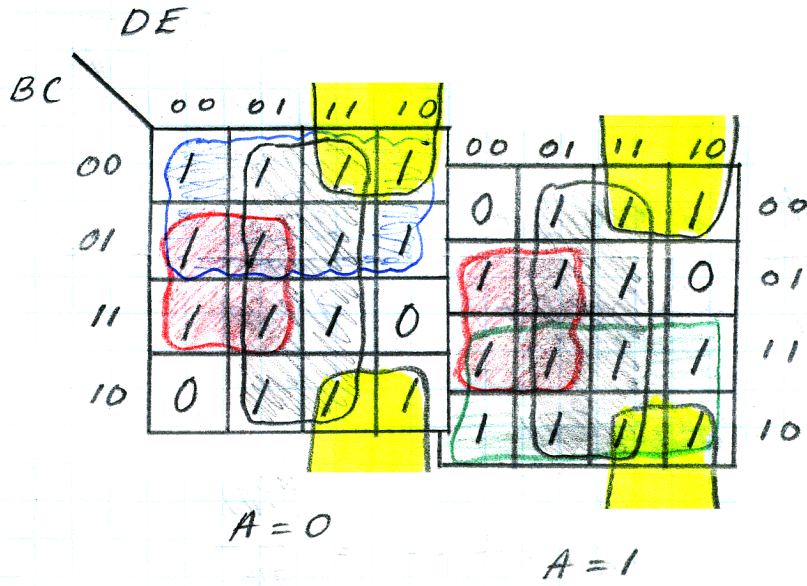
$$1a) F = AB + (\overline{A+C}) + \overline{B}C$$

A	B	C	AB	$\overline{A+C}$	$\overline{B}C$	F
0	0	0	0	0	0	0
0	0	1	0	0	1	1
0	1	0	0	0	0	0
0	1	1	0	0	0	0
1	0	0	0	0	0	0
1	0	1	0	1	1	1
1	1	0	1	0	0	1
1	1	1	1	1	0	1

$$\begin{aligned}
 1b) F &= AB + (\overline{A+C}) + \overline{B}C = \overset{\text{DE MORGANS}}{\leftarrow} \\
 &= AB + AC + \overline{B}C = \overset{\text{CONSENSUS}}{\leftarrow} \\
 &= AB + \overline{B}C
 \end{aligned}$$



2.



$$F = \bar{A}\bar{B} + AB + C\bar{D} + \bar{C}D + E =$$

$$= (\overline{A \oplus B}) + (C \oplus D) + E$$

A B C D E

