פתרון תרגיל מס' 3:

A B C	$\bar{B}C$	$\overline{A+BC}$	$\bar{A}(\overline{A+BC})$	$\bar{B}C+\bar{A}(\overline{A+BC})$
0 0 0	0	1	1	1
0 0 1	1	1	1	1
0 1 0	0	1	1	1
0 1 1	0	0	0	0
1 0 0	0	0	0	0
1 0 1	1	0	0	1
1 1 0	0	0	0	0
1 1 1	0	0	0	0

(1)

$F(1,0,0,0) = \overline{1\cdot\bar{0}\cdot 0} + 1\cdot\bar{0}\cdot(0\cdot\bar{0}+\bar{1}\cdot 0)$ (1c) (2)

$\bar{0} + 1\cdot 1\cdot(0+0)$

$1 + 0 = 1$

$F(1,0,0,1) = \overline{1\cdot\bar{0}\cdot 0} + \underline{1\cdot\bar{1}\cdot(0\cdot\bar{0}+\bar{1}\cdot 1)}$ (2)

$\bar{0} + 0 = 1 + 0 = 1$

$F(1,0,1,1) = \overline{1\cdot\bar{0}\cdot 1} + 1\cdot\bar{1}\cdot(0\cdot\bar{0}+\bar{1}\cdot 1)$ (1c)

$\bar{1} + \underline{1\cdot 0\cdot(\quad)}$

0

$0 + 0 = 0$

A B C	$\bar{A}C$	$\bar{A}B$	$\bar{A}C+\bar{A}B$	ABC
0 0 0	1	1	1	0
0 0 1	1	1	1	0
0 1 0	0	1	1	0
0 1 1	0	1	1	0
1 0 0	0	0	0	0
1 0 1	0	0	0	0
1 1 0	0	0	0	0
1 1 1	0	0	0	1

(3)

(4)

ABCD	$F_1 = ABCD + \bar{A}\bar{B}\bar{C}\bar{D}$	$F_2 = A + \bar{A}B + \bar{A}\bar{B}C + \bar{A}\bar{B}\bar{C}D$	$F_3 = A\bar{B} + \bar{B}C + C\bar{D}$
0000	1	0	0
0001	0	1	0
0010	0	1	1
0011	0	1	1
0100	0	1	0
0101	0	1	0
0110	0	1	1
0111	0	1	0
1000	0	1	1
1001	0	1	1
1010	0	1	1
1011	0	1	1
1100	0	1	0
1101	0	1	0
1110	0	1	1
1111	1	1	0

F_1 ↑ שתי אפשרויות
1111
או
0000

F_2 ↑ הכל חוץ מ-
0000

F_3 ↑ 3 אפשרויות
(AB) = (1,0)
(BC) = (0,1)
(CD) = (1·0)