

HW #3

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Section 5

CMSC 313

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Exercise #1

	A	B	C	$\sim A + (C * B)$	$\sim(\sim B * \sim C)$	$(\sim A + (C * B)) * (\sim(\sim B * \sim C))$
0	0	0	0	1	0	0
1	0	0	1	1	1	1
2	0	1	0	1	1	1
3	0	1	1	1	1	1
4	1	0	0	0	0	0
5	1	0	1	1	1	1
6	1	1	0	1	1	1
7	1	1	1	1	1	1

SOP: $F = (A' B' C) + (A' B C') + (A B C') + (A B C) + (A' B C) + (A B' C) + (A B C)$

POS: $F = (A B C) + (A' B C)$

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Exercise #2

	A	B	C	$\sim(\sim A * B) * \sim(\sim A * B)$	$A * C$	$\sim(\sim A * B) * \sim(\sim A * B) + (A * C)$
0	0	0	0	0	0	0
1	0	0	1	0	0	0
2	0	1	0	0	0	0
3	0	1	1	0	0	0
4	1	0	0	1	0	1
5	1	0	1	1	1	1
6	1	1	0	1	0	1
7	1	1	1	1	1	1

SOP: $F = (A B' C') + (A B' C) + (A B C') + (A B C)$

POS : $F = (A' B' C') + (A' B' C) + (A' B C') + (A' B C)$

Exercise #3

A	B	output
0	0	1
0	1	0
1	0	0
1	1	1

SOP: $F = (A' B') + (A B)$

POS: $F = (A' B) + (A B')$