ANDREW D. CADITAN

Activity: Boolean to Logic Diagram and Truth Table

Total: 3 Problems (5 points each = 15 points)

Problem# 1 (5 pts)

Given:

$$F_1 = A \cdot B + A \cdot B'$$

1.

A

A · B + A · B’

= A · (B · B’)

= A · 1

F1 = A

B

A -> F

C

A	B	F1
0	0	0
0	1	0
1	0	1
1	1	1

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Problem 2 (5 pts)

Given:

$$F_2 = (A + B) \cdot (A' + C)$$

1

A

(A+B) · (A’ +C)

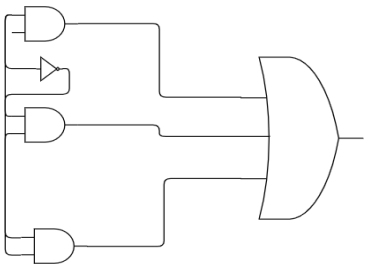
= (A+B) · A’ (A +B) · C

= (A· A’ + B · A’) + (A · C + B · C)

= (0 + BA’) + (AC +BC)

= BA’ + AC +BC

B



C

A	B	C	F2
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	1

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Problem 3 (5 pts)

Given:

$$F_3 = (A \cdot B') + (A' \cdot C)$$

A

No need to simplify haha

C

A	B	C	F3
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	0