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CSCI 3130

Homework 4

Due: Feb. 16, 10:00 PM

1. (3 points each) Simplify the following Boolean expressions using algebraic manipulation.

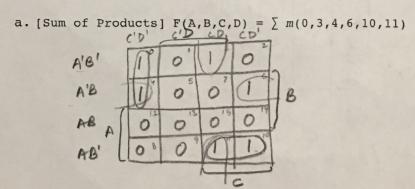
a.
$$F(A,B,C) = AC' + ABC' + AC$$

= $A(C'+C) + ABC'$
= $A + ABC'$

b.
$$F(X,Y,Z) = X'Y'Z' + X + Y + Z$$

= $Y'Z' + X + Y + Z$
= $Z' + X + Y + Z$
= $X + Y + 1$
= $X + L$
= L

2. (3 points each) For each of the following truth tables, use a Karnaugh map to get a simplified expression in the requested format.



$$[S_0P] = A'C'D' + A'BD' + B'CD + AB'C$$

$$F(A,B,C,D)$$