Show your work. The correct answer is only half the credit

1.) Write a truth table for a seven-segment display decoder that will display Hexadecimal values. Use K-maps to find Boolean equations for outputs Sa through Sg. Design the circuit for a seven-segment display that is active-LOW, meaning that sending a 0 to a segment turns it ON, and sending a 1 to a segment turns it OFF! This information will be useful for those in the ENGR 272 lab. Show your work and include your K-maps and your reduced equations.

Hex	D3	D2	D1	D0	Sa	Sb	Sc	Sd	Se	Sf	Sg
0	0	0	0	0							
1	0	0	0	1							
2	0	0	1	0							
3	0	0	1	1							
4	0	1	0	0							
5	0	1	0	1							
6	0	1	1	0							
7	0	1	1	1							
8	1	0	0	0							
9	1	0	0	1							
A	1	0	1	0							
b	1	0	1	1							
C	1	1	0	0							
d	1	1	0	1							
E	1	1	1	0							
F	1	1	1	1