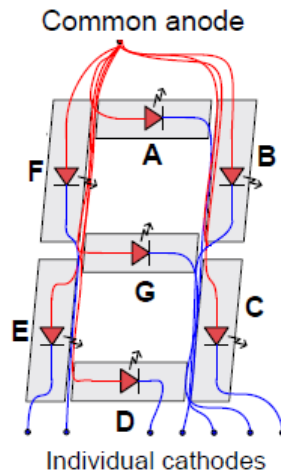


Problem 1

I3	I2	I1	I0	A	B	C	D	E	F	G
0	0	0	0							
0	0	0	1							
0	0	1	0							
0	0	1	1							
0	1	0	0							
0	1	0	1							
0	1	1	0	0	1	0	0	0	0	0
0	1	1	1							
1	0	0	0	0	0	0	0	0	0	0
1	0	0	1							
1	0	1	0							
1	0	1	1							
1	1	0	0							
1	1	0	1							
1	1	1	0							
1	1	1	1							



1. Fill the truth table for an active low seven segment decoder **Hint:** we will use lower case letters for 11, 12, 13 and upper case letters for 10, 14, and 15.
2. Using four variable K-maps find the most simplified minterms expressions for LEDs A to D.
3. Using four variable K-maps find the most simplified maxterms expressions for LEDs E to G.

Problem 2

1. Repeat problem 1 assuming BCD input which limits the digits between 0 and 9 and the rest are don't care.
2. Comment on how much the "don't care" inputs helped you to reduce your expressions.