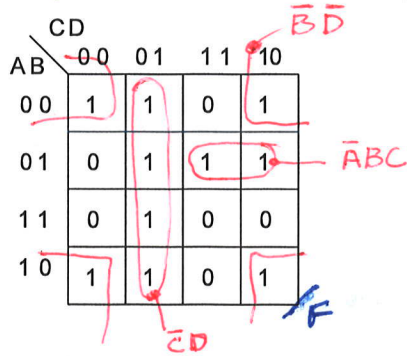


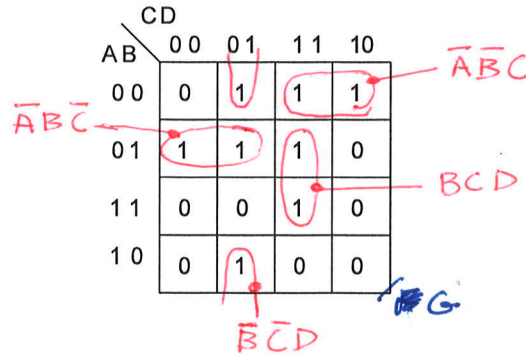
ENGR-354 HW # 5  
Due Thursday 10/15/15

Loop out SOP minimum cover for the functions shown in the K-maps below and write the boolean expression for the reduced functions. Show which loop each term comes from.

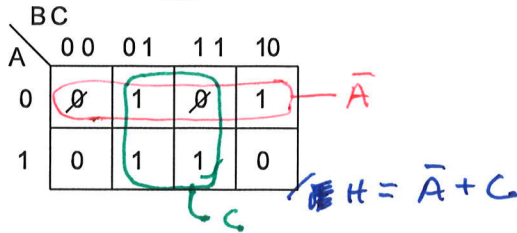
1)  $F = \bar{C}D + \bar{B}\bar{D} + \bar{A}BC$



2)  $G = \bar{A}\bar{B}\bar{C} + \bar{A}\bar{B}C + \bar{B}\bar{C}D + BCD$

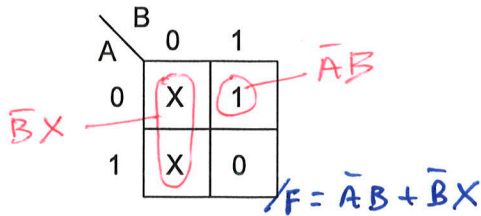


3)  $H = \bar{A} + C$

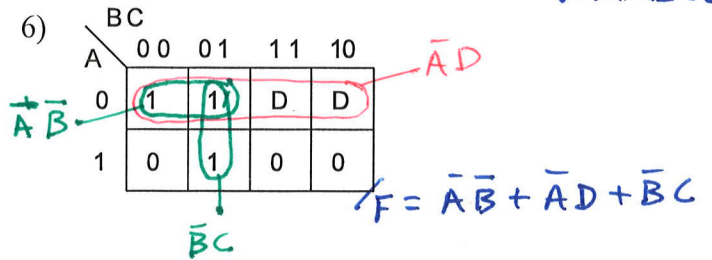


Loop out SOP cover and write the reduced functions that result for the entered variable K-maps below. **NOTE: D in (6) IS AN ENTERED VARIABLE**

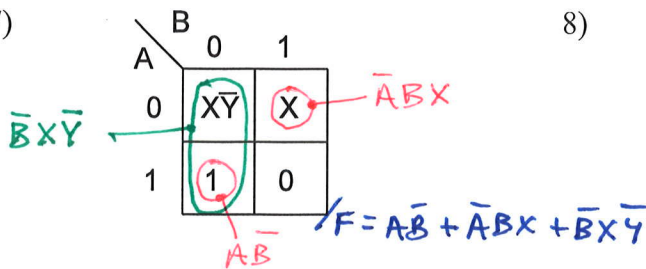
5)  $F = \bar{A}B + \bar{B}X$



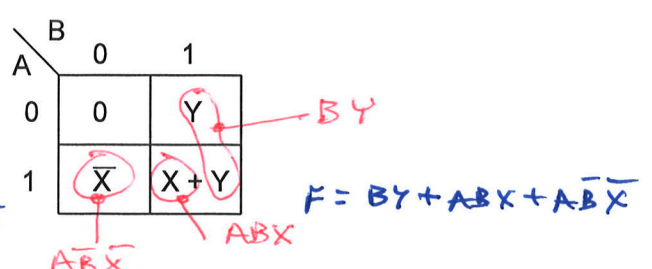
6)  $F = \bar{A}\bar{B} + \bar{A}D + \bar{B}C$



7)  $F = \bar{A}\bar{B} + \bar{A}BX + \bar{B}X\bar{Y}$



8)  $F = BY + \bar{A}BX + \bar{A}B\bar{X}$



Keep in mind the idea of sub-maps to understand the contents of a cell with entered variables.