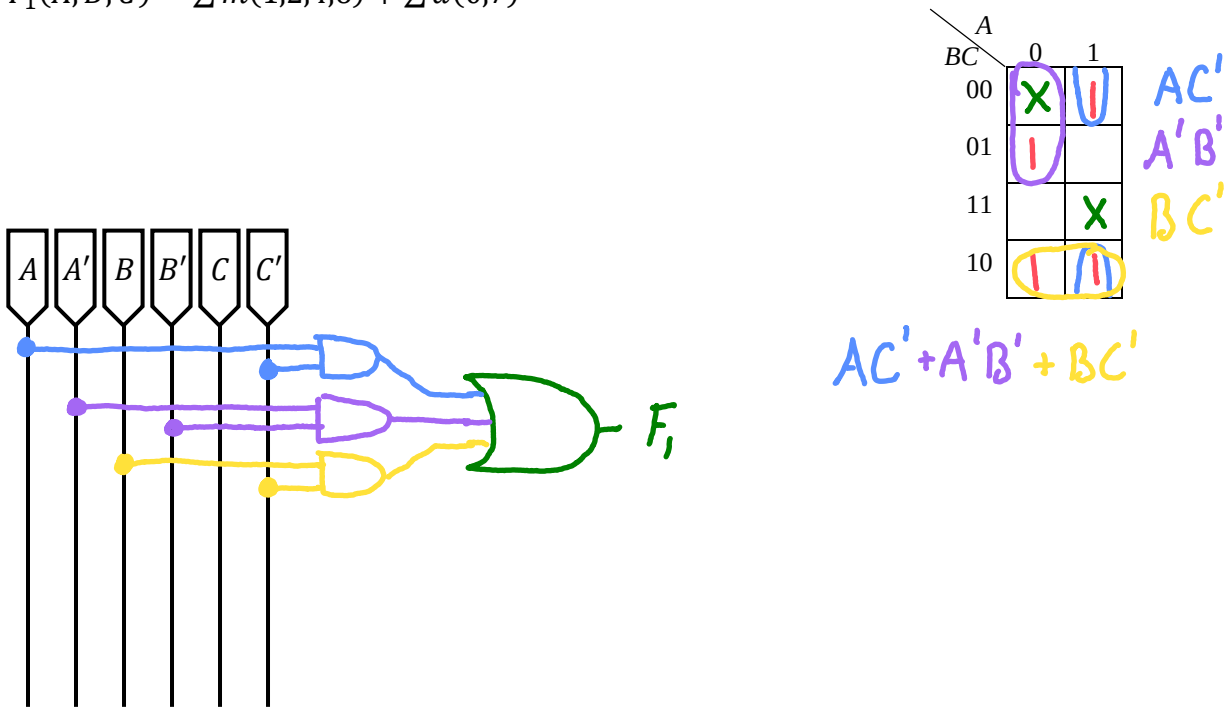
Use K-maps to reduce the expressions shown below. Your final expression should be in minimal 2-stage Sum of Products form. Draw the logic circuit to implement each function. You must use K-Maps as drawn here. Do not change the orientation or any of the labels.

For this problem the output of the previous block of the system has each of A, A', B, B', C, C', D and D' available as inputs to your circuit on the wires that are shown.

a) $F_1(A,B,C) = \sum m(1,2,4,6) + \sum d(0,7)$



b) $F_2(A,B,C,D) = \sum m(0,2,4,7,8,10,11,12,13,14,15) + \sum d(1,6,9)$