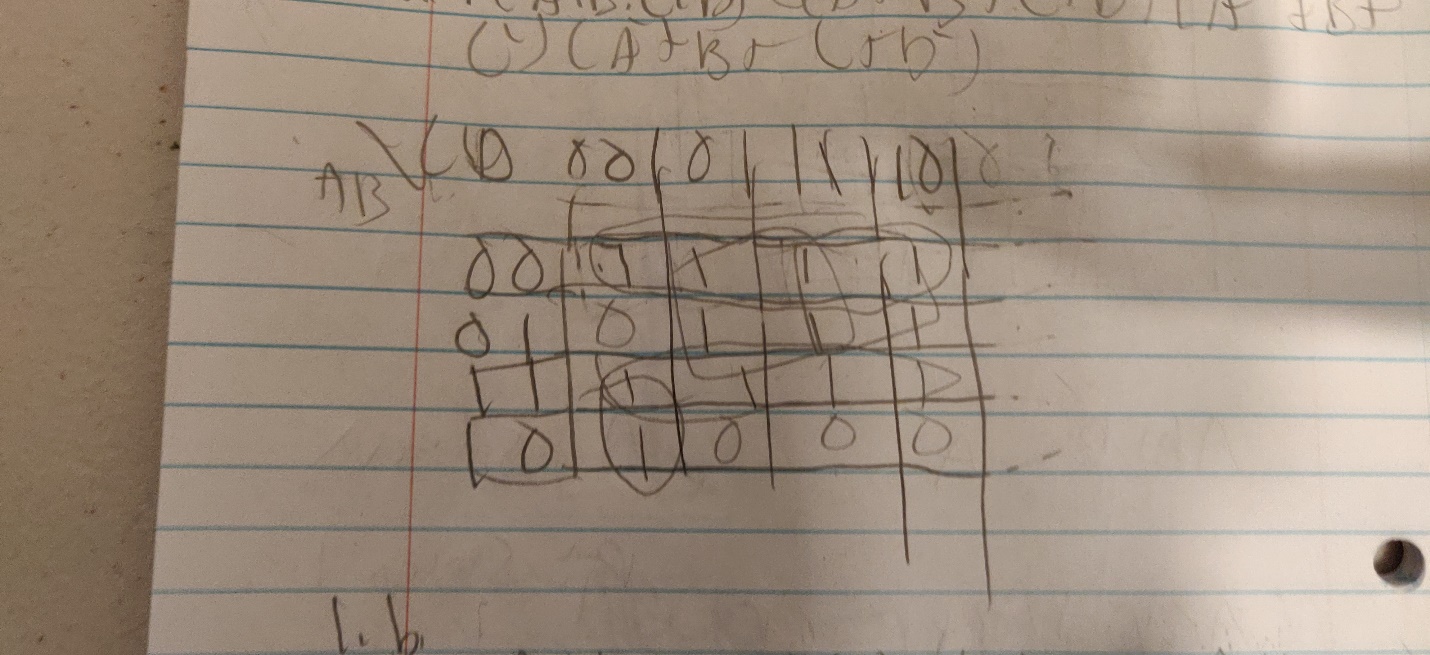
**HOMEWORK 6**

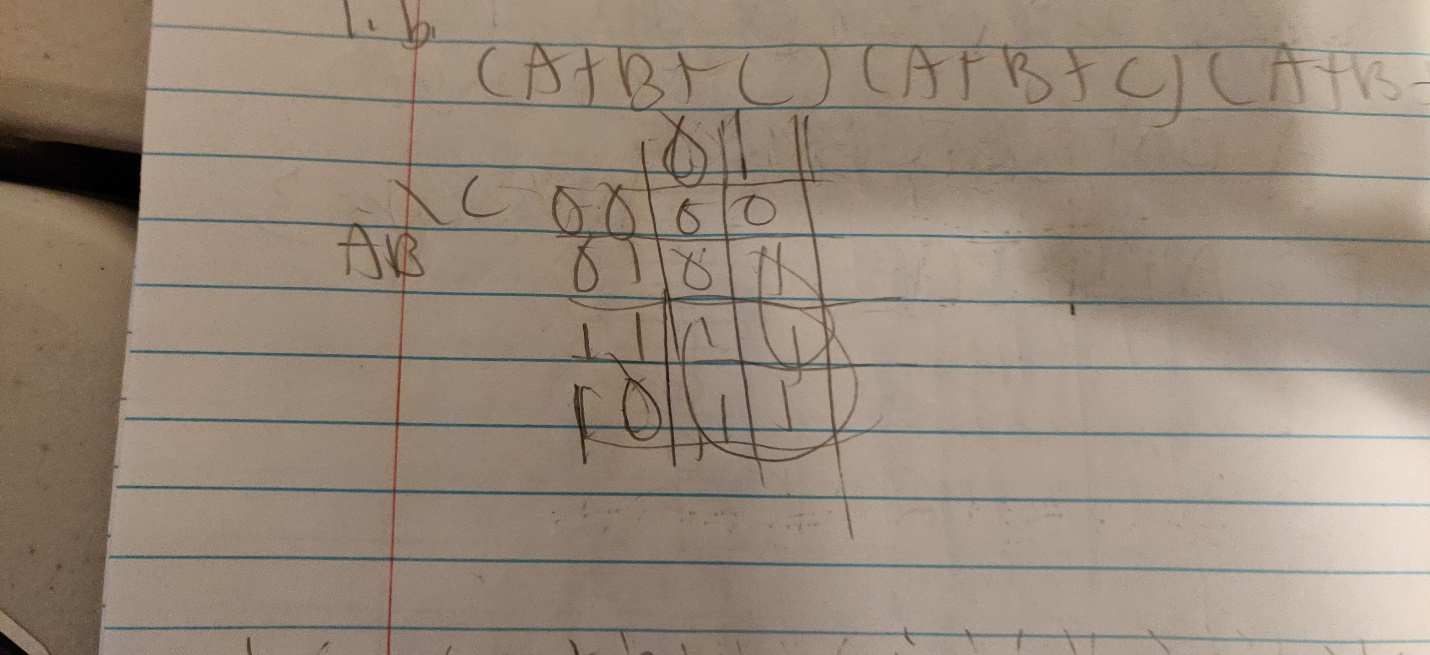
1. For the following functions simplify using K-Map





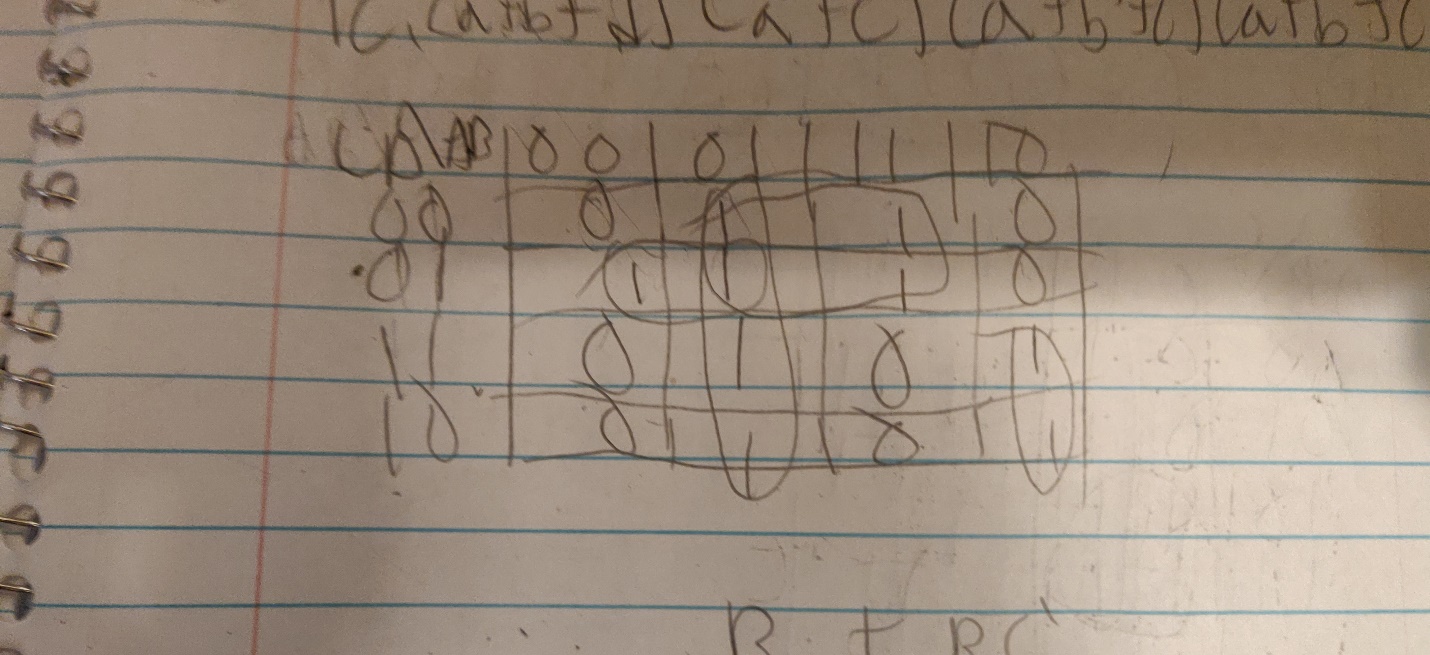
AC’D’





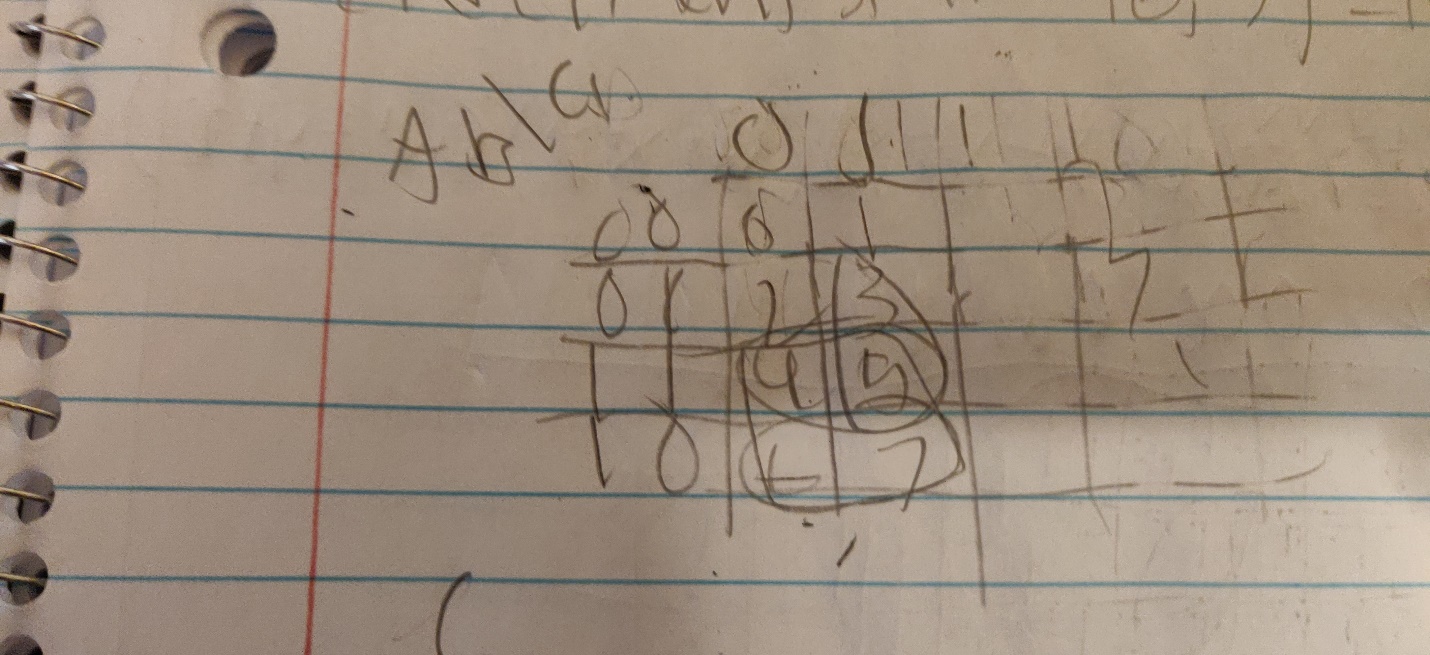
BC+A





B+BC’

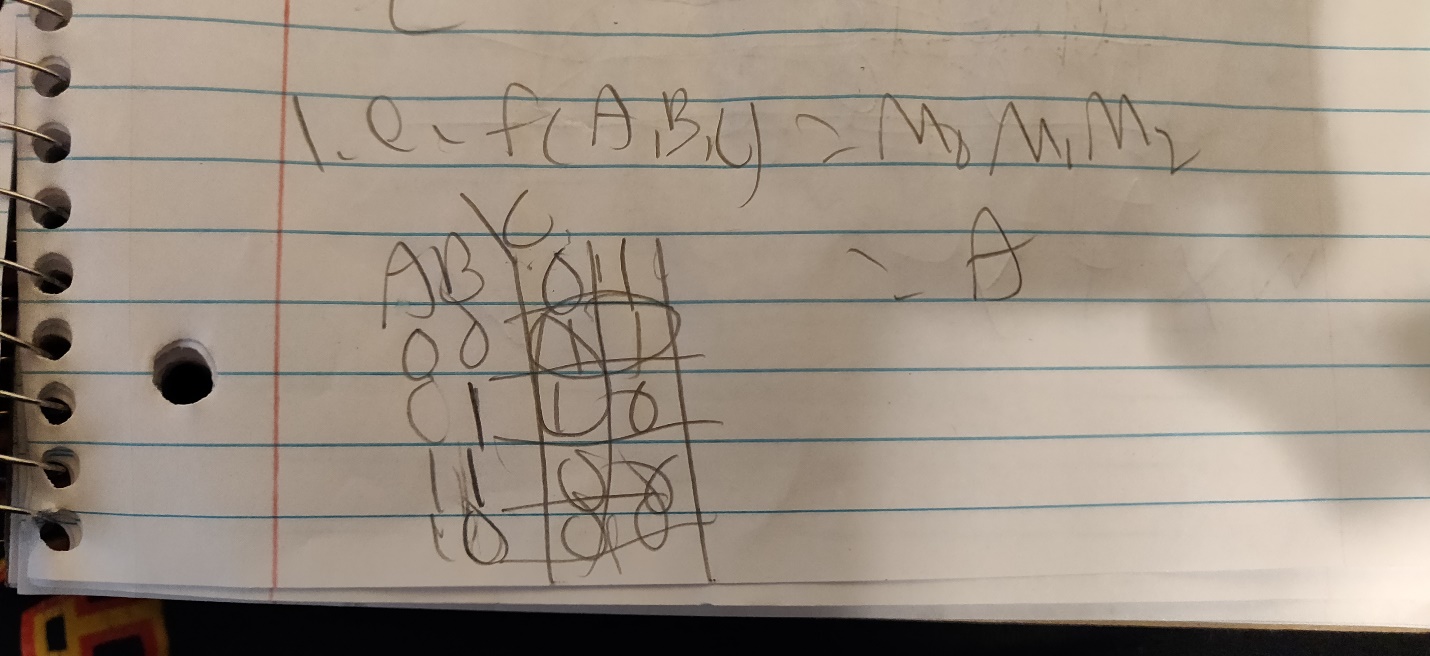




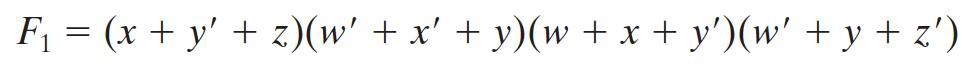
C

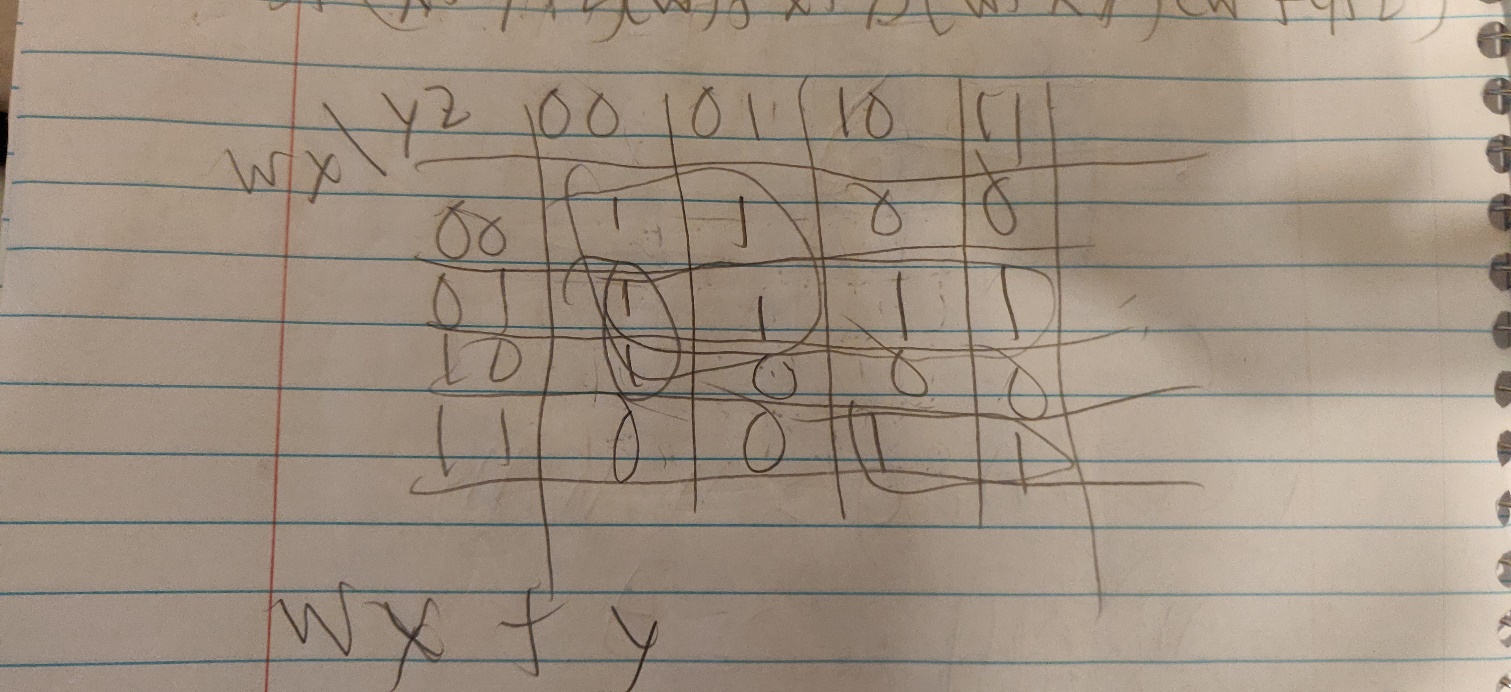




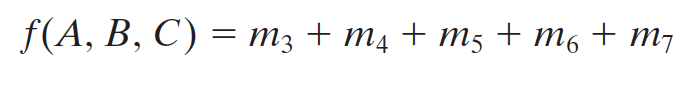


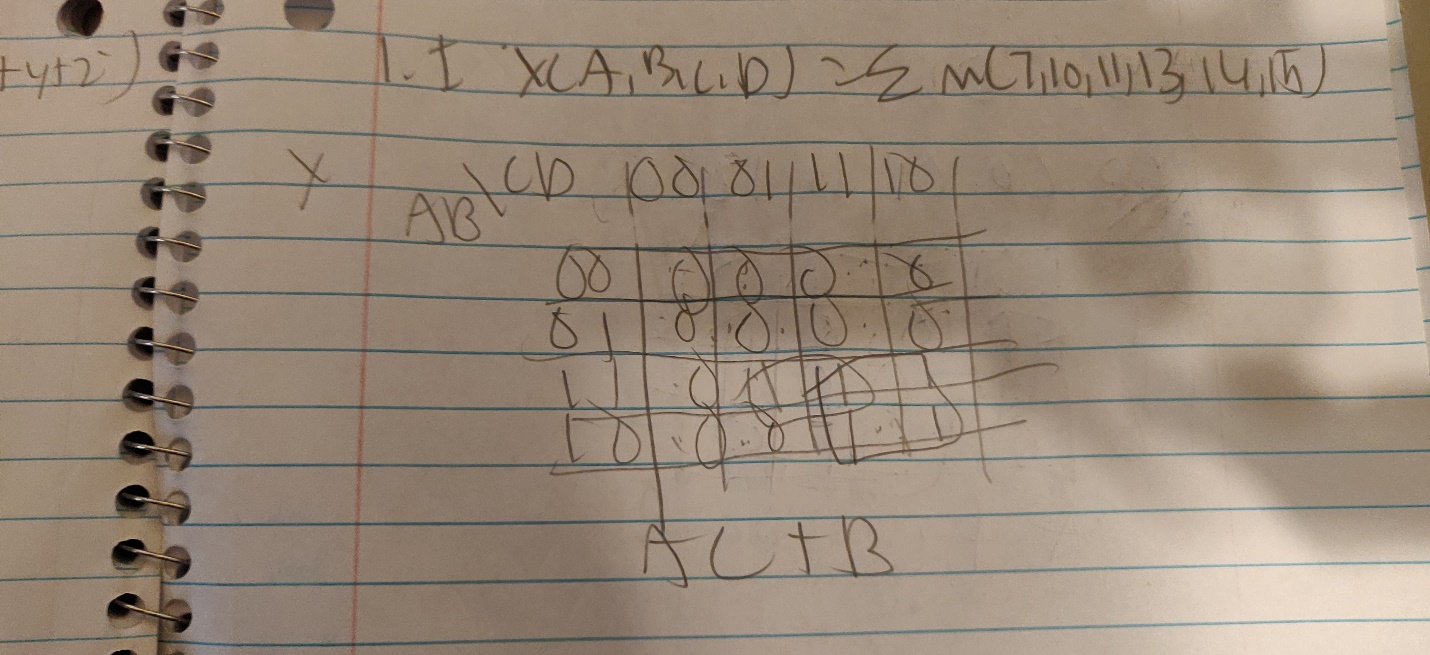
A+C



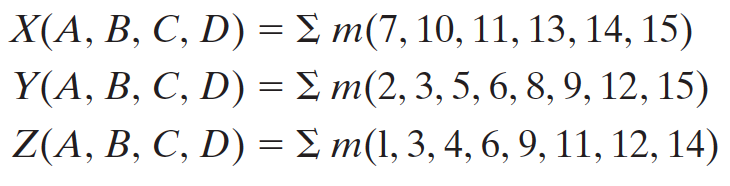


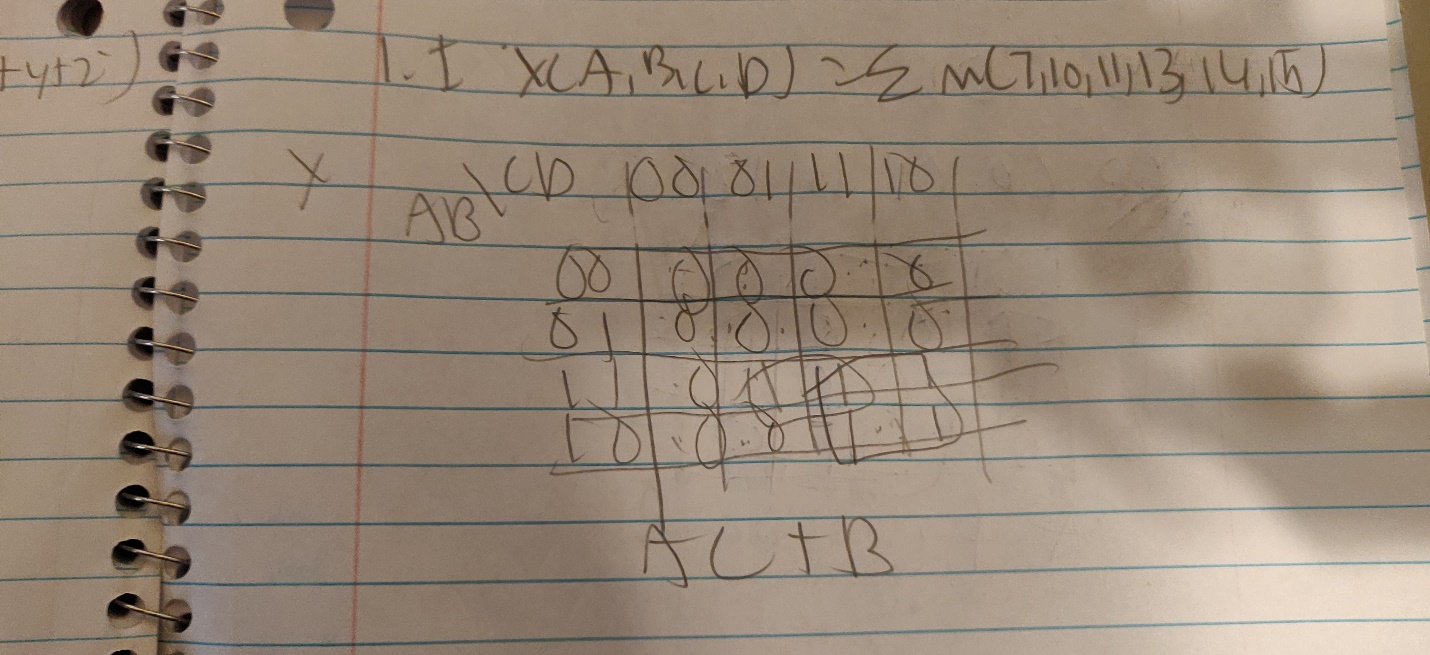
WX+Y





AB+C





X=AC+B



Y=A+B’+A’B’



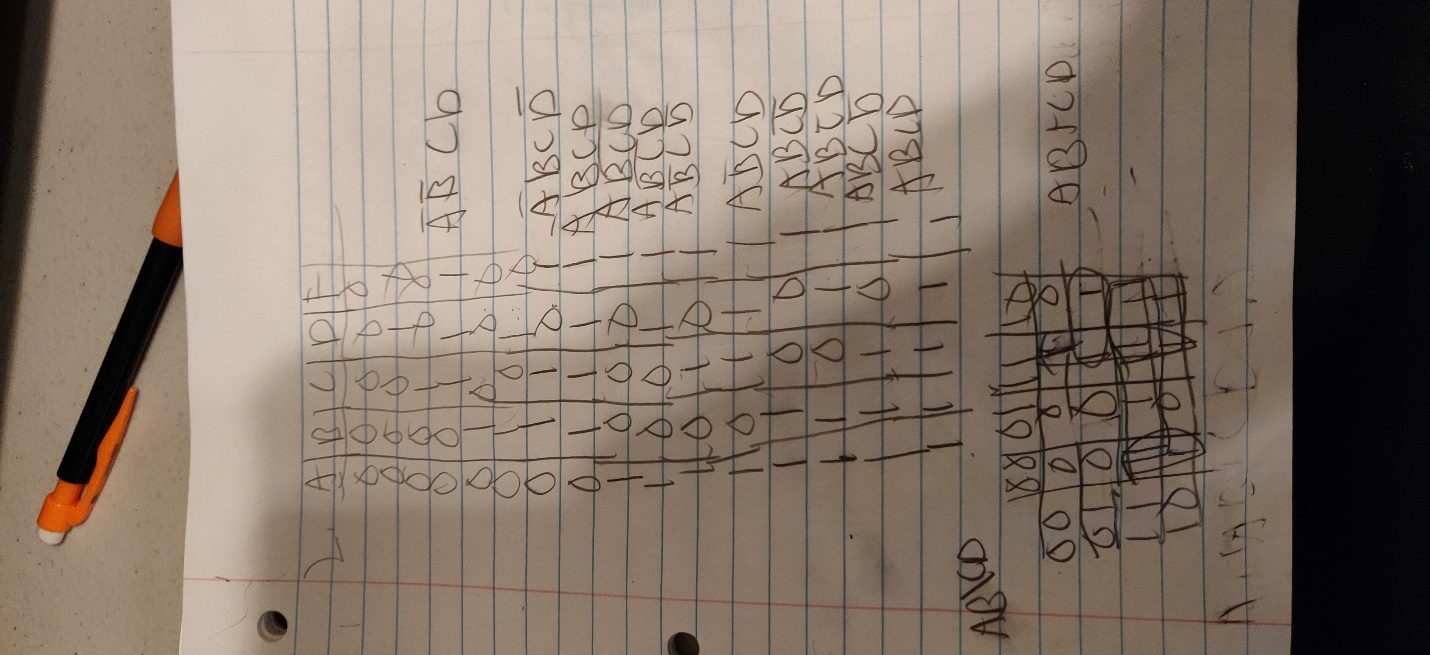
Z=A+C

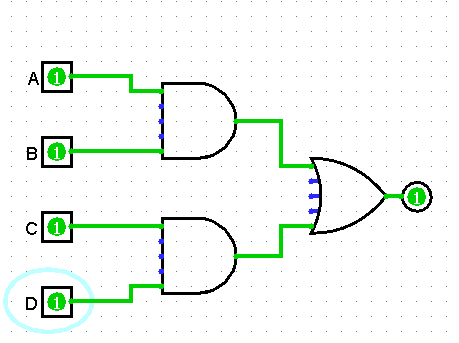
**2)** Derive the Boolean function in a POS form from the following truth table



Draw the circuit in Logisim and test the truth table

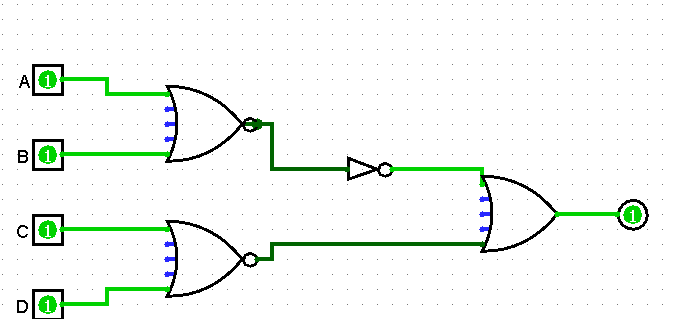
Simplify the function using KMap.



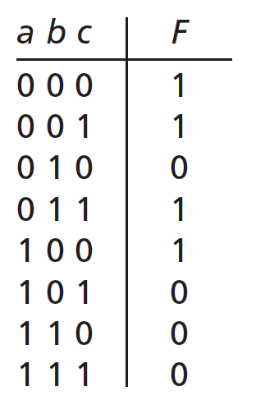


AB+D+A

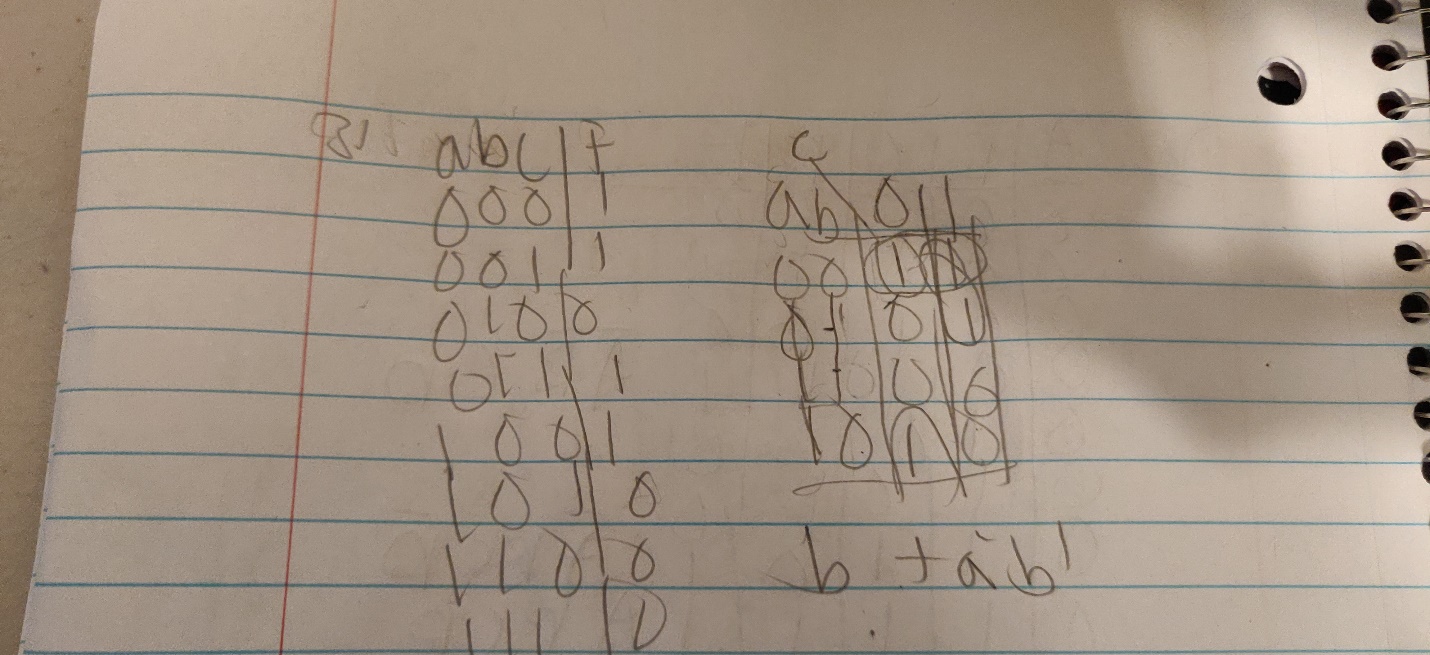
Design an equivalent circuit only using NOR gates and test the truth table using Logisim.

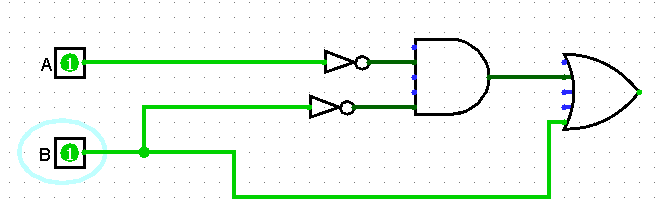


**3)** From the following truth table derive the Boolean Expression in a POS from, simplify using K-Map and draw the Logic Diagram that represent the simplified circuit.

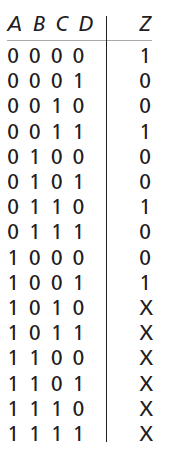


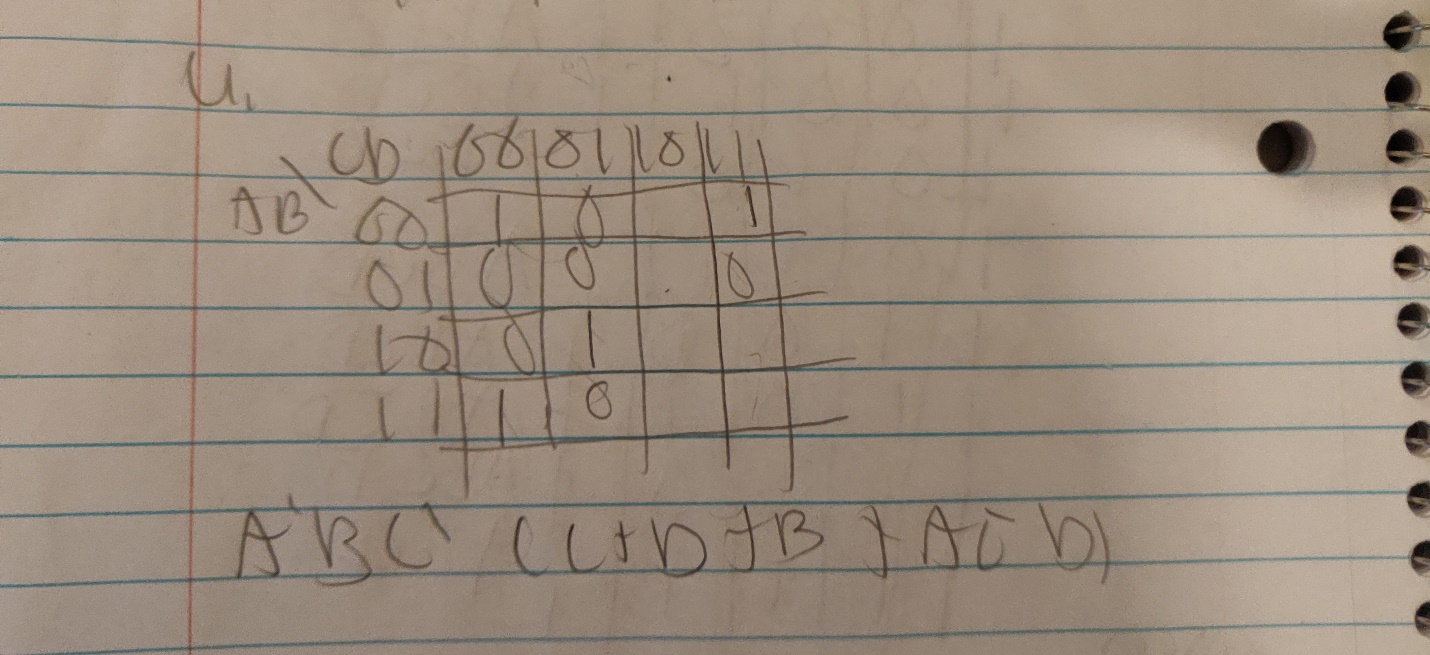
B+A’B’

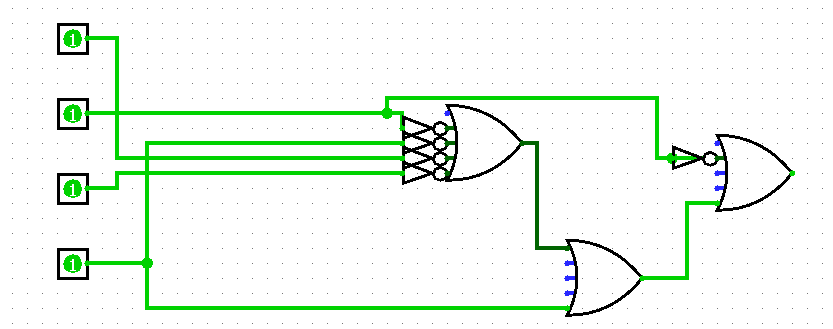




**4)** From the following truth table derive the Boolean Expression in a POS from, simplify using K-Map and draw the Logic Diagram that represent the simplified circuit.







**5)** From the following K-Map derive the simplified Boolean Expression in a SOP and in a POS form. Draw both Logic Diagram that represent the circuits.

