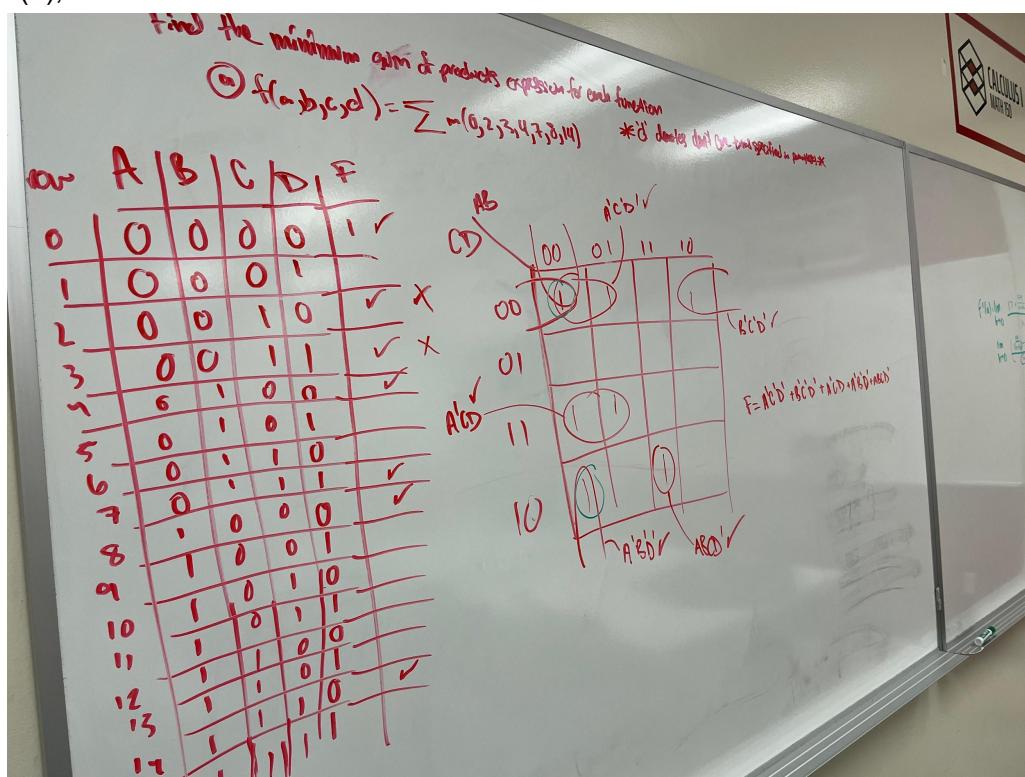
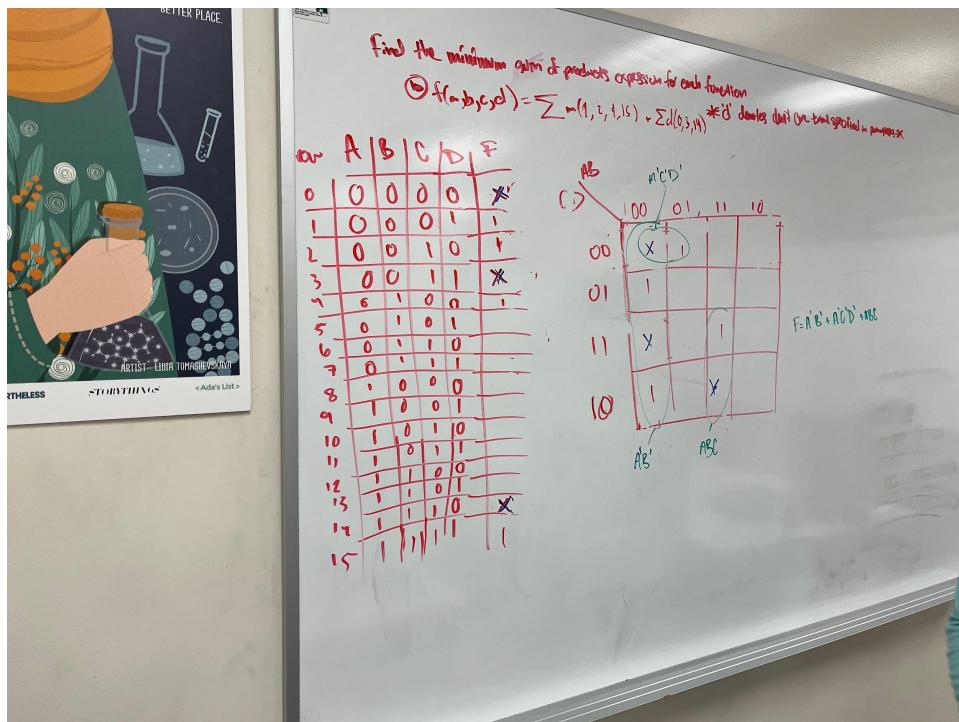


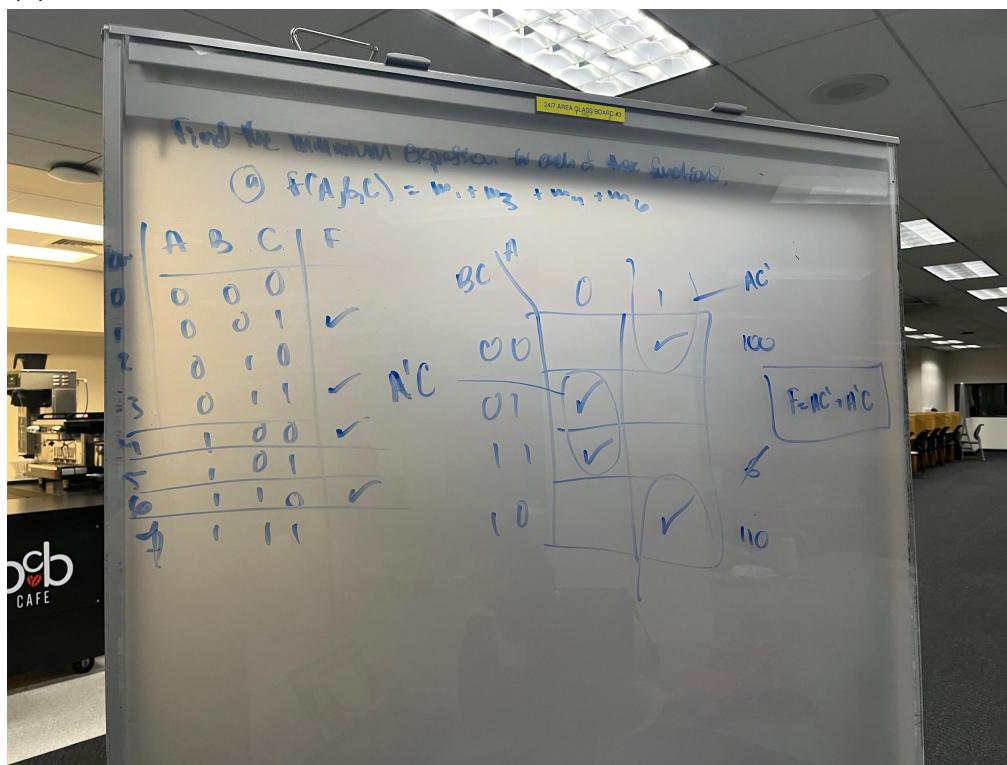
$$1(a); F = A'C'D' + B'C'D' + A'CD + A'B'D' + ABCD'$$



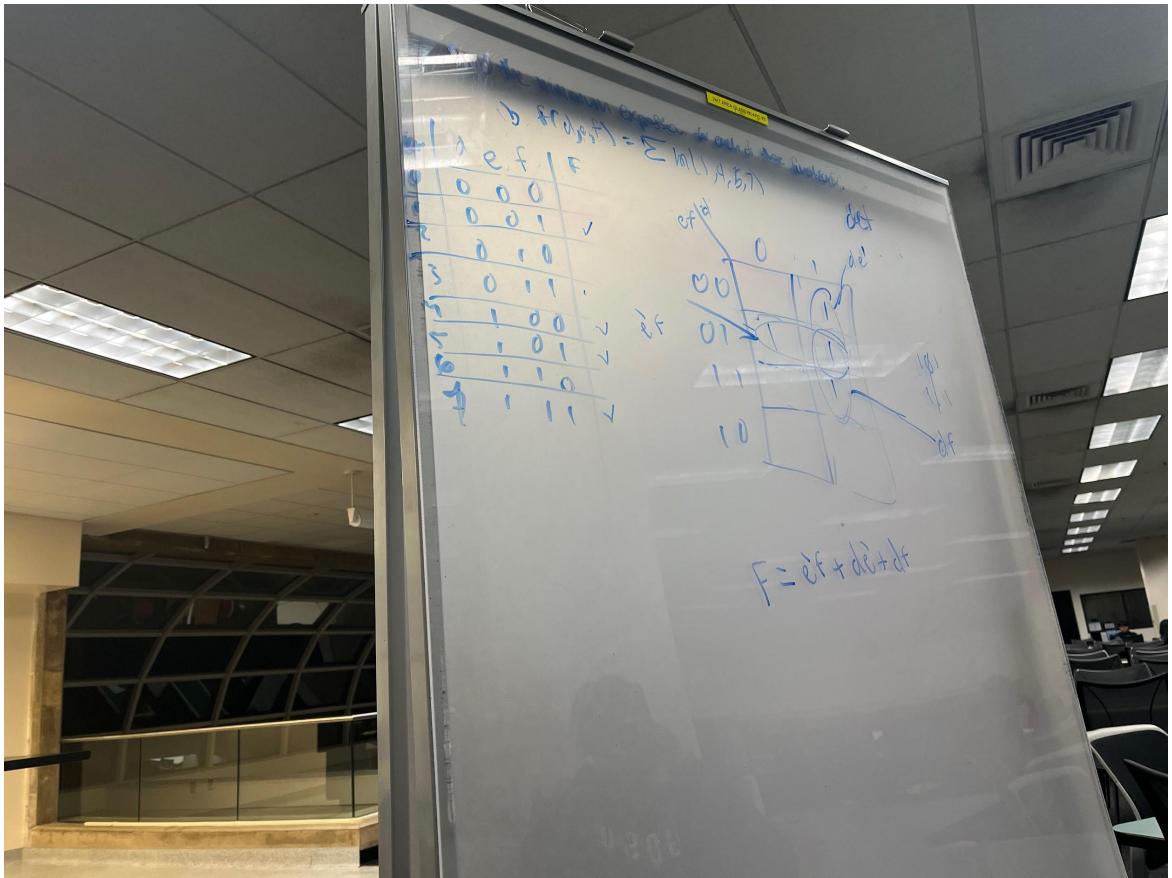
$$1(b); F = A'B' + A'C'D' + ABC$$



2(a):  $F = AC' + A'C$



2(b):  $F = E'F + DE' + DF$



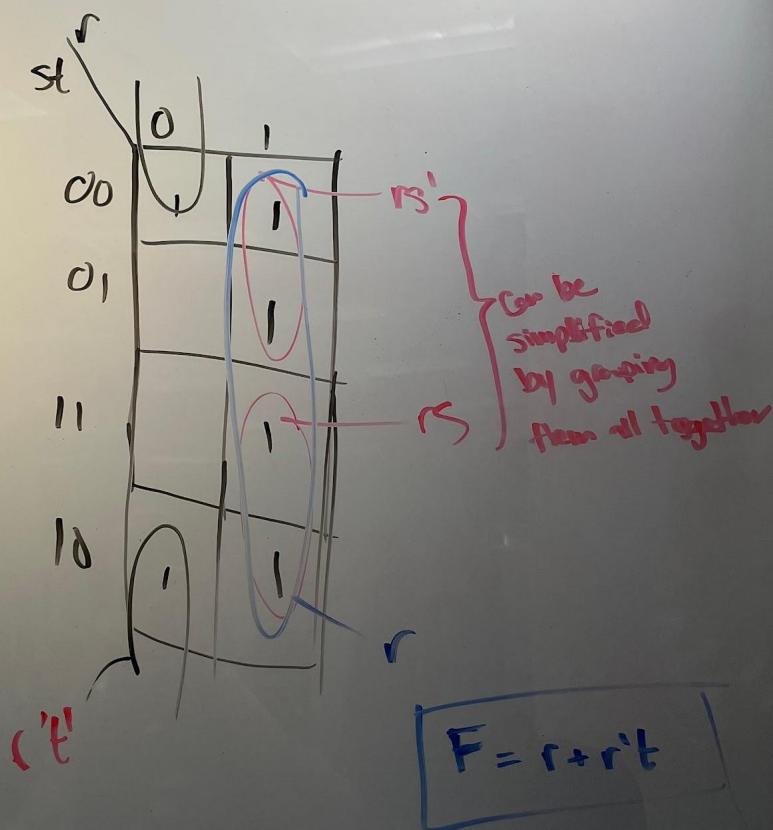
2(c):  $F = r + r't$

$$(c) f(r, s, t) = rt + rs' + rs$$

row	r s t	F
m0	0 0 0	1
m1	0 0 1	1
m2	0 1 0	1
m3	0 1 1	1
m4	1 0 0	1
m5	1 0 1	1
m6	1 1 0	1
m7	1 1 1	1

	r	s	t
rs'	1	0	diff
rs	1	1	diff
rt'	0	1	diff

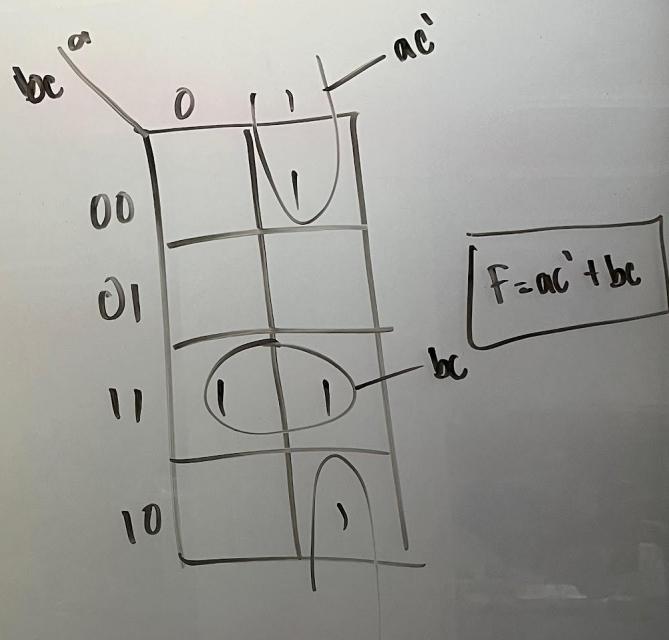
✓



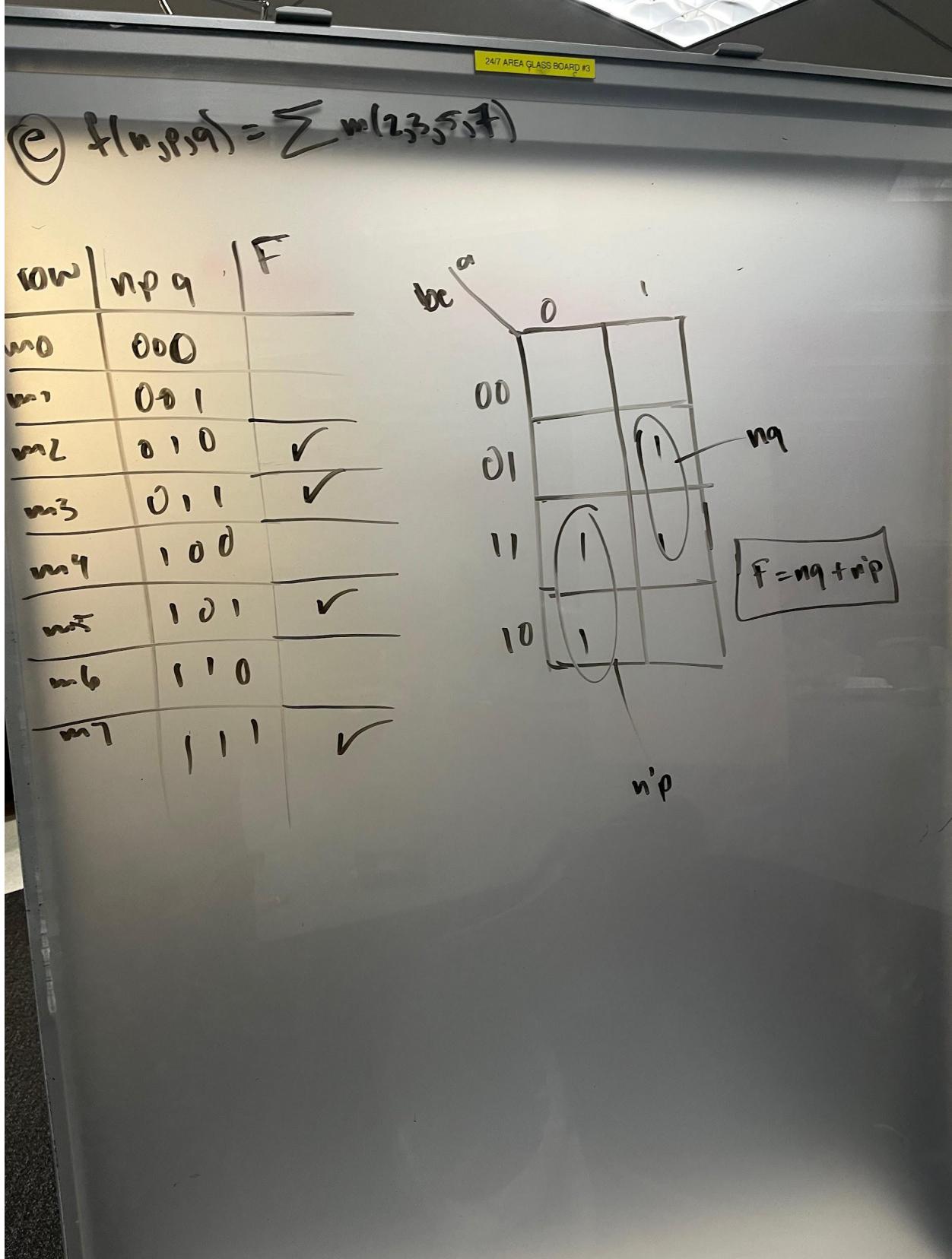
2(d):  $F = AC' + BC$

$$(d) f(a,b,c) = m_3 + m_4 + m_6 + m_7$$

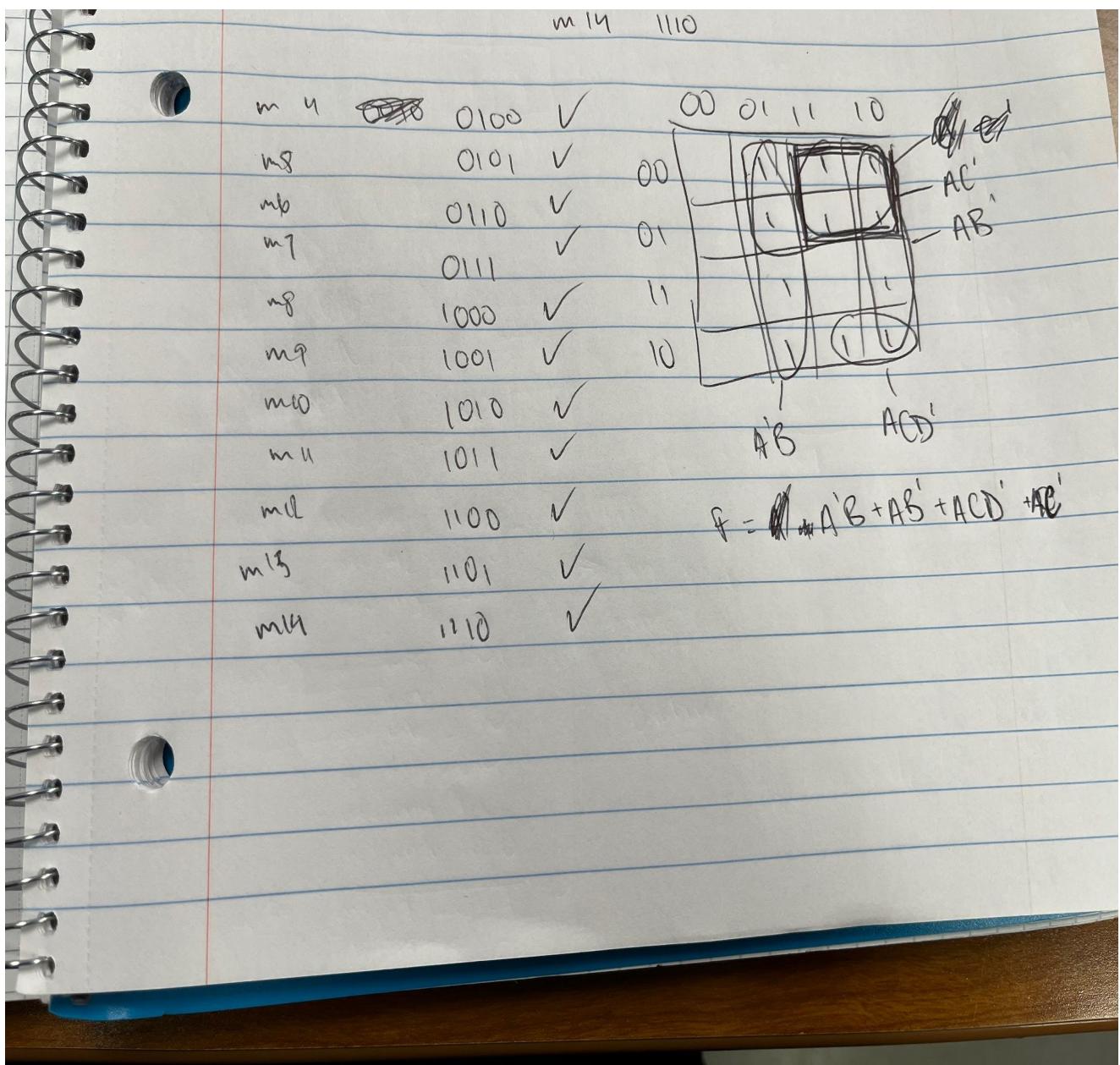
row	a	b	c	F
m0	0	0	0	
m1	0	0	1	
m2	0	1	0	
m3	0	1	1	✓
m4	1	0	0	✓
m5	1	0	1	
m6	1	1	0	✓
m7	1	1	1	✓



$$2(e): F = nq + n'p$$



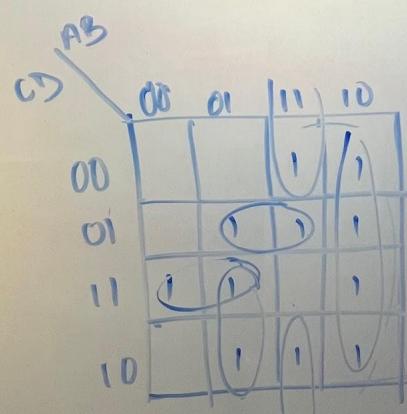
3(a):  $F = A'B + AB' + ACD' + AC'$



3(b):  $F = AC' + AD' + B'CD + A'BD + A'BC$

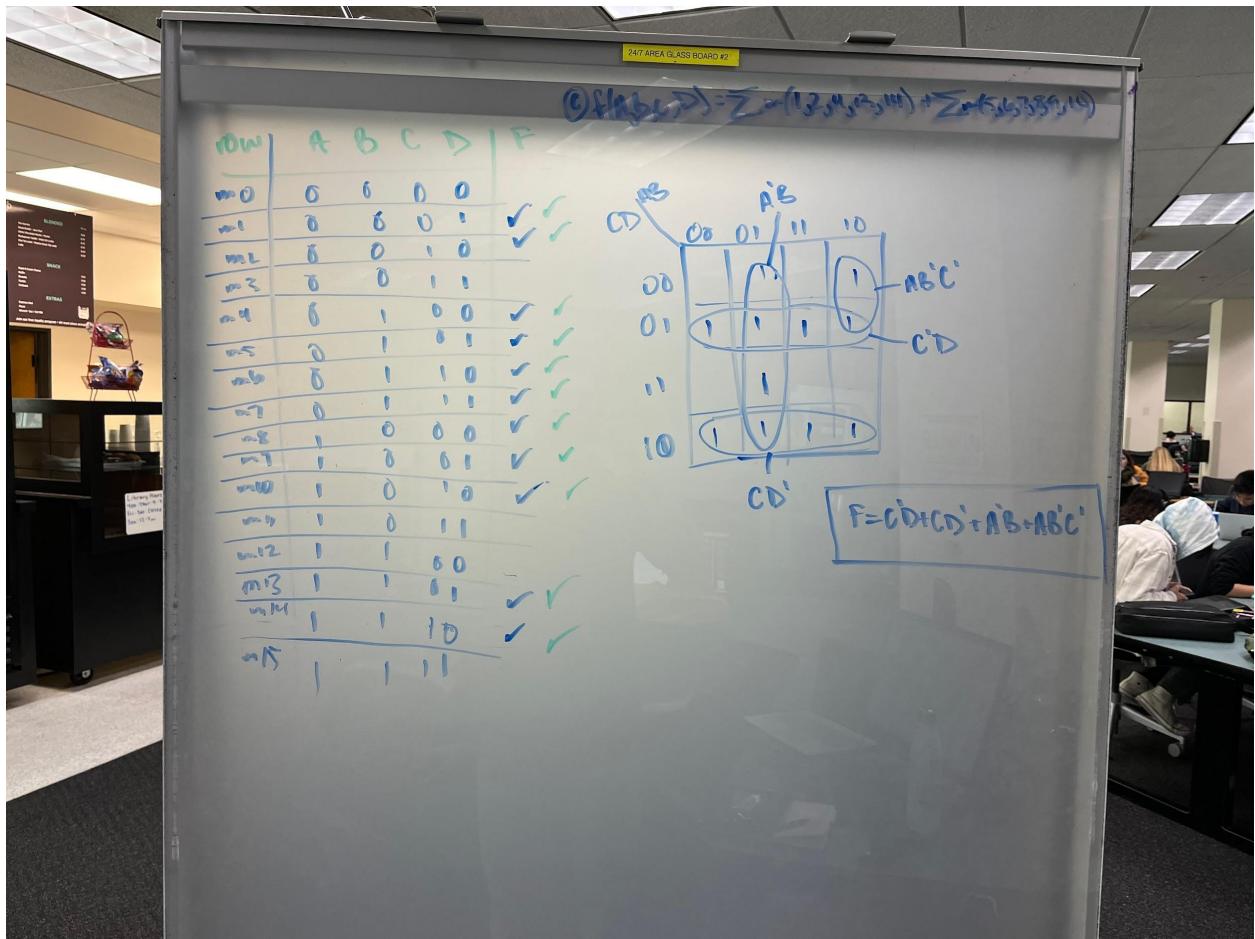
(a)  $f(A, B, C, D) = \sum m(3, 11, 12, 13, 14) + \sum m(5, 6, 7, 8, 9, 10)$

	A	B	C	D	F
m0	0	0	0	0	0
m1	0	0	0	1	1
m2	0	0	1	0	0
m3	0	0	1	1	1
m4	0	1	0	0	0
m5	0	1	0	1	1
m6	0	1	1	0	0
m7	0	1	1	1	1
m8	1	0	0	0	0
m9	1	0	0	1	1
m10	1	0	1	0	0
m11	1	0	1	1	1
m12	1	1	0	0	0
m13	1	1	0	1	1
m14	1	1	1	0	0
m15	1	1	1	1	1



EPI

3(c):  $F = C'D + CD' + A'B + AB'C'$



3(d):  $F = A'B + BCD$

