HOMEWORK

1) F₁ = a)

A B C D	F
0 0 0 0	1
0 0 0 1	1
0 0 1 0	0
0 0 1 1	0
0 1 0 0	1
0 1 0 1	1
0 1 1 0	0
0 1 1 1	0
1 0 0 0	1
1 0 0 1	1
1 0 1 0	1
1 0 1 1	0
1 1 0 0	1
1 1 0 1	1
1 1 1 0	0
1 1 1 1	0

F₂ =

A B C D	F
0 0 0 0	0
0 0 0 1	0
0 0 1 0	0
0 0 1 1	1
0 1 0 0	0
0 1 0 1	1
0 1 1 0	0
0 1 1 1	1
1 0 0 0	1
1 0 0 1	1
1 0 1 0	1
1 0 1 1	1
1 1 0 0	0
1 1 0 1	1
1 1 1 0	0
1 1 1 1	1

F₁ = b)

AB \ CD	C'D'	C'D	CD	CD'
A'B'	1	1	0	0
A'B	1	1	0	0
AB	1	1	0	0
AB'	1	1	0	1

$= C' + AB'D'$

F₂ =

AB \ CD	C'D'	C'D	CD	CD'
A'B'	0	0	1	0
A'B	0	1	1	0
AB	0	1	1	0
AB'	1	1	1	1

$CD + BD + AB' + A'C'D$

2)

a)

A B C D	B'	D'	AD'	AD	BC	CD'	A'	C'	A'B'C'D'	F
0 0 0 0	1	1	0	0	0	0	1	1	1	1
0 0 0 1	1	1	0	0	0	0	1	1	0	0
0 0 1 0	1	1	0	0	0	1	1	0	0	1
0 0 1 1	1	0	0	0	0	0	1	0	0	0
0 1 0 0	0	1	0	0	0	0	1	1	0	0
0 1 0 1	0	0	0	0	0	0	1	1	0	1
0 1 1 0	0	1	0	0	1	1	1	0	0	1
0 1 1 1	0	0	0	0	1	0	1	0	0	1
1 0 0 0	1	1	1	0	0	0	0	1	0	1
1 0 0 1	1	0	1	1	0	0	0	1	0	1
1 0 1 0	1	1	1	0	0	1	0	0	0	1
1 0 1 1	1	0	1	1	0	0	0	0	0	0
1 1 0 0	0	1	0	0	0	0	0	1	0	1
1 1 0 1	0	0	0	1	0	0	0	1	0	1
1 1 1 0	0	1	0	0	1	1	0	0	0	1
1 1 1 1	0	0	0	1	1	0	0	0	0	1

b)

AB \ CD	C'D'	C'D	CD	CD'
A'B'	1	0	0	1
A'B	0	0	1	1
AB	0	1	1	1
AB'	1	1	1	1

c) $F = B'D' + BC + AD$

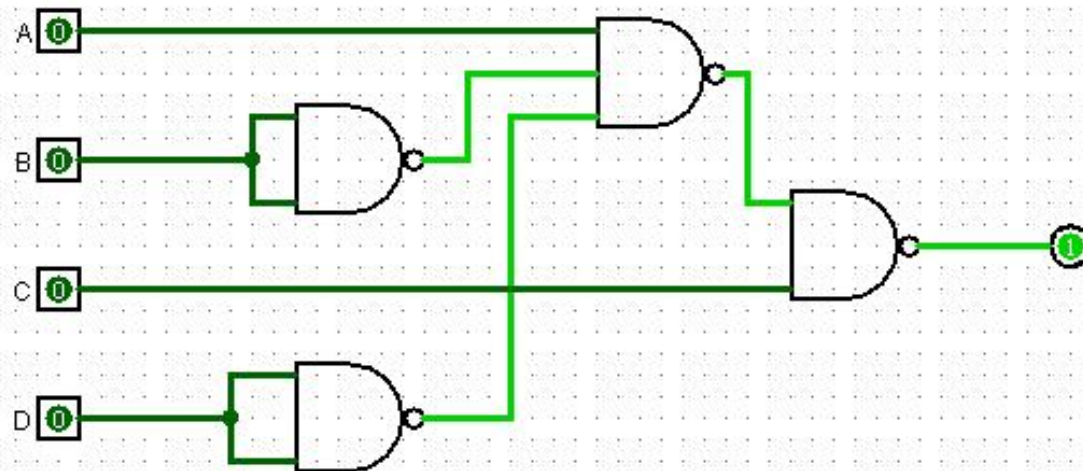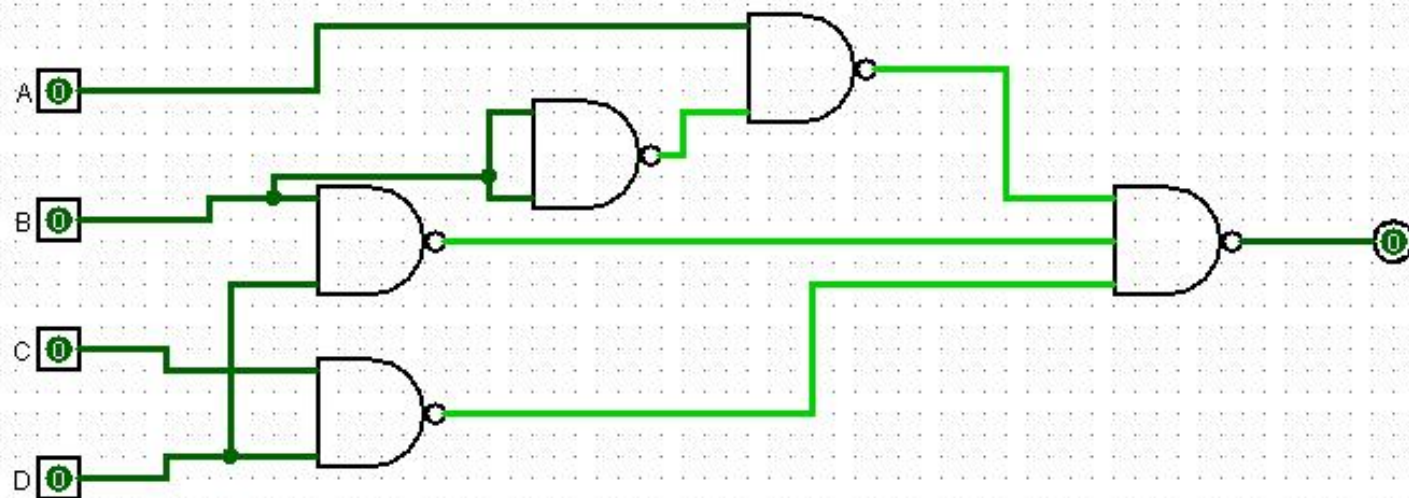### d) $F' = A'B'D + A'C'D + BC'D'$
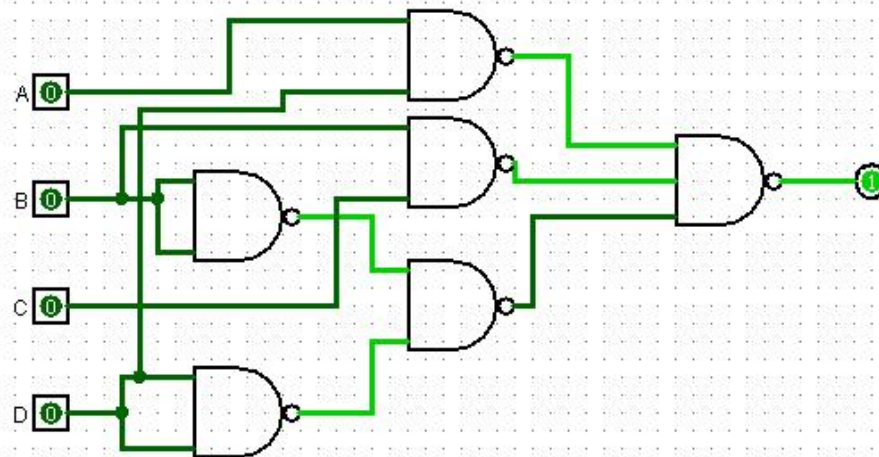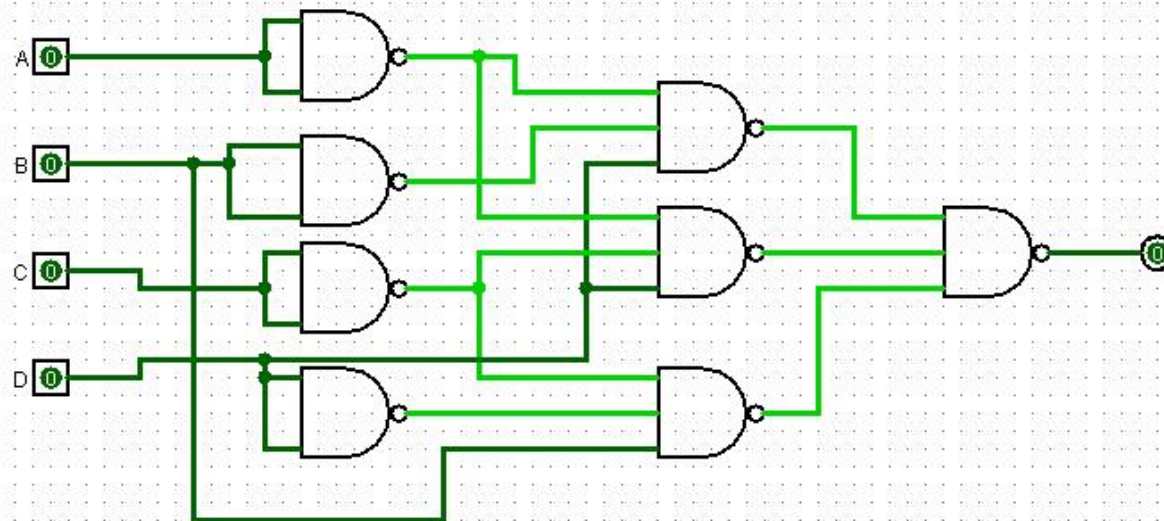
$(A'B'D)'$ N
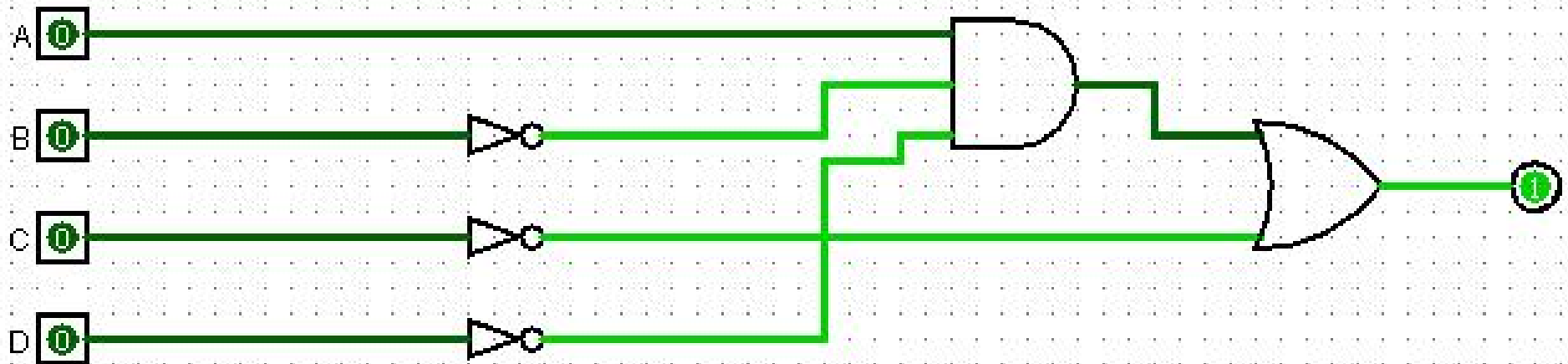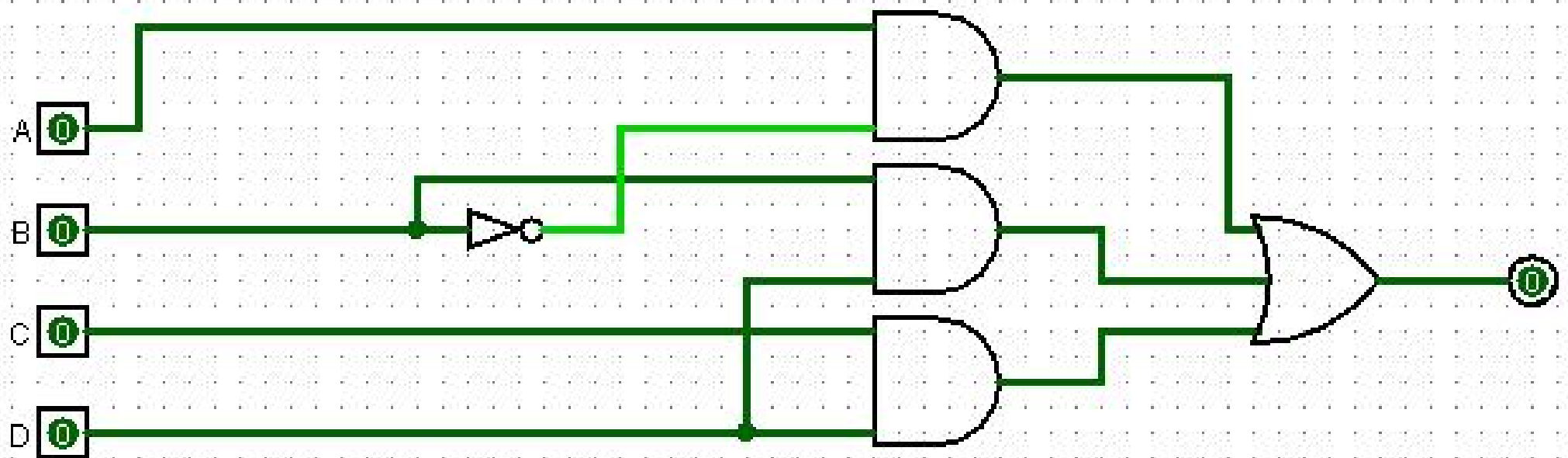
Question 1 F1

Question 1 F2

QUESTION 1 3.PART F1 FUNCTION WITH NAND

QUESTION 1 3.PART F2 FUCNTION WITH NAND

QUESTION 2 5.PART F FUNCTION WITH NAND

QUESTION 2 5.PART F REVERSE FUCNTION WITH NAND