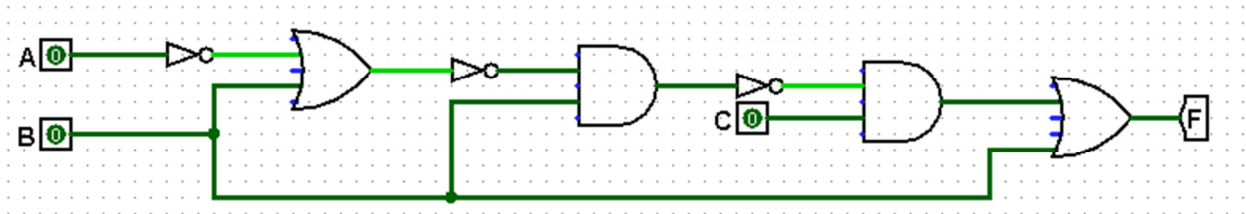


Due: **9/13/2013** at the beginning of class

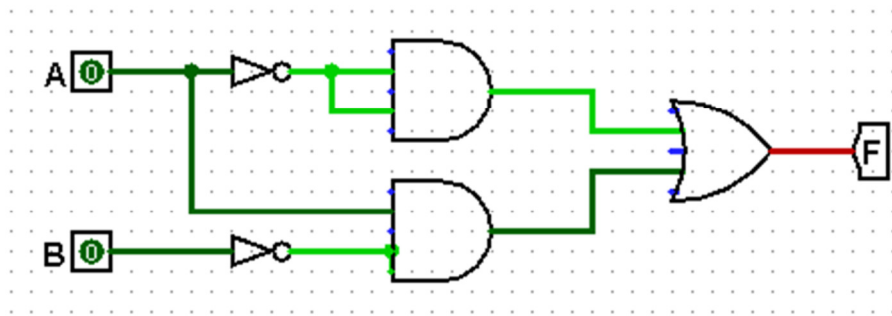
SHOW YOUR WORK

- 1 Draw the equivalent circuit with **only NAND Gates** of the following circuits (do not simplify them):

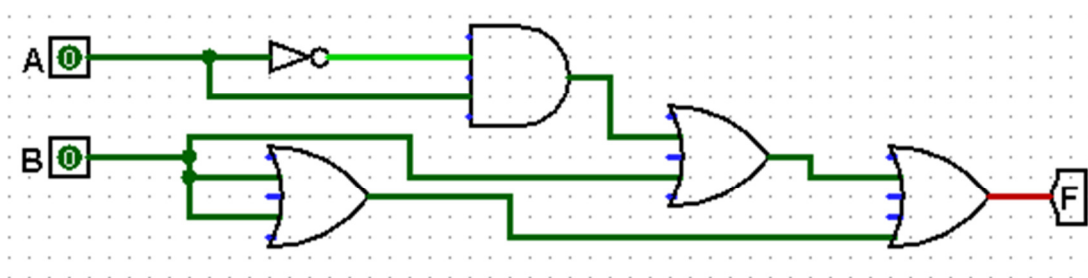
a)



b)



c)



- 2 Same as Problem 1 but with **only NOR gates**

3 From the Truth Tables below:

- Obtain the Sum-of-Products
- Obtain the Product-of-Sums
- Which one is better and why (# of inputs, # of gates, # of terms....etc)

a)

w	x	y	z
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	1

b)

w	x	y	z
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	1
1	1	1	0

c)

v	w	x	y	z
0	0	0	0	0
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	0
0	1	0	1	0
0	1	1	0	1
0	1	1	1	0
1	0	0	0	1
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	0
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0