Pre-Lab Worksheet #2 NAME: _____ LAB Section: B0__

1. The SOP of : $F(A,B,C,D) = \Sigma m(1,2,3,5,6,9) + \Sigma d(7,10,11,12,13)$

AB\CD

	00	01	11	10
00				
01				
11				
10				

2. The circuit that represents the SOP of $F(A,B,C,D)$ using OR gates, AND gates and inverters (on main inputs).

3. The POS of : $F(A,B,C,D) = \Sigma m(1,2,3,5,6,9) + \Sigma d(7,10,11,12,13)$

AB\CD

	00	01	11	10
00				
01				
11				
10				

4. Draw the POS form of the circuit using OR and AND gates (plus inverters on the main inputs.)

5. Re-draw the circuit using only 2-input NOR gates (plus inverters on the main inputs.) Include pin numbers.

6. Karnaugh maps and simplified functions X, Y, and Z

A\BC

	00	01	11	10
0				
1				

X

A\BC

	00	01	11	10
0				
1				

Y

A\BC

	00	01	11	10
0				
1				

Z

7. Draw circuits for X, Y, and Z using only 2-input NAND gates and Inverters on the inputs. Include chip pin numbers on all inputs and outputs.

Finally, write a list of things that you learned in doing this pre-lab: