

ECE2030 Homework 2  
Due 1/22/04

1. Find the Sum of Products and the Product of Sums for the following truth table.

ABC	F	Minterms	Maxterms
000	0		
001	0		
010	1		
011	1		
100	1		
101	1		
110	0		
111	0		

POS = \_\_\_\_\_

SOP = \_\_\_\_\_

2. Using Mixed Logic, draw a gate-level circuit for the following expressions using only NOR gates (and invertors).
- a)  $F = ABC\overline{(D+E)}$
  - b)  $F = AB\overline{(C+D)}$
  - c)  $F = (A+\overline{B})\overline{(C+D)}$
3. Repeat Problem 2, but obtain a realization that uses only NAND gates (and invertors).