

DC 1-3

Functionally
Complete Sets

Given the following functions:

$$F(a,b,c,d) = a'b'd + abc' + abcd' + b'c'd'$$

$$F(x,y,z) = (xy+x'z) (x'y+z') (xyz')$$

$$F(j,k,l) = jk' + k'l' + j'l'$$

$$F(A,B,C) = A'BC + AB + (AC'+B) (A'+BC)$$

- Convert to SSOP and SPOS using Boolean manipulation
- Convert to SSOP and SPOS using Truth tables
- Implement using AND, OR and NOT gates
- Implement using only NAND gates
- Implement using only NOR gates