Some Practice Problems in Karnaugh Map:

Find all prime implicants and the essential prime implicants

- $f(x,y,z) = \sum m(0,1,3,4,7)$
- $f(x,y,z) = \sum m(0,1,2,3,4,5,6,7)$
- $f(w,x,y,z) = \sum m(0,2,4,5,10,11,13,15)$
- $f(D,C,B,A) = \prod M(1,\ 2,\ 5,\ 6,\ 9,\ 10,\ 11,\ 13,\ 14)$
- $f(w,x,y,z) = \prod M(1,\ 2,\ 4,\ 5,\ 6,\ 7,\ 9,\ 10,\ 11,\ 12,\ 14)$
- $f(w,x,y,z) = \prod M(2,\ 3,\ 4,\ 5,\ 6,\ 10,\ 13)$

Find minimized SOP

- $f(x,y,z) = \sum m(0,2,3,4,7)$
- $f(w,x,y,z) = \sum m(0,4,8,10,11,12,13,15)$
- $f(w,x,y,z) = \sum m(1,3,5,7,8,10,12,13,14)$

Find minimized POS

- $f(x,y,z) = \prod M(0,1,2,3,5,7)$
- $f(w,x,y,z) = \prod M(0,1,2,7,8,9,11,12,14,15)$
- $f(w,x,y,z) = \prod M(5,10,11,13,14,15)$