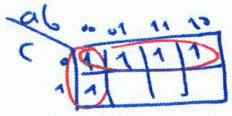
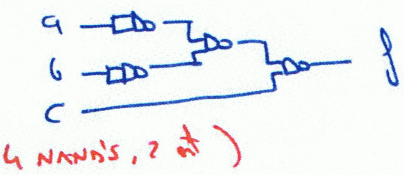
a) $f(a,b,c) = \sum_1 (0,1,2,4,6)$

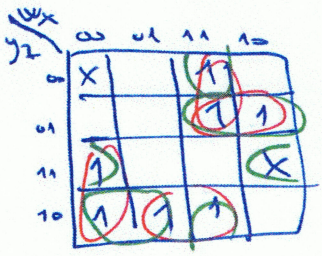


$f = \bar{a}\bar{b} + \bar{c} = \overline{\overline{\bar{a}\bar{b} + \bar{c}}} = \overline{\overline{\bar{a}\bar{b}} \cdot \overline{\bar{c}}}$



(4 NANDs, 2 nivs)

b) $g(w,x,y,z) = \sum_m (1,3,6,9,11,13,14) + \phi(0,11)$

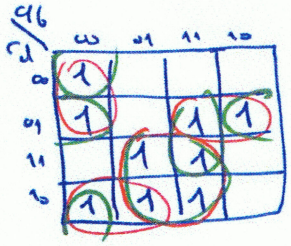


hay varias opciones,

- $g = \bar{w}\bar{x}y + xyz + wx\bar{y} + w\bar{y}z = \overline{\bar{w}\bar{x}y \cdot \overline{xyz} \cdot \overline{wx\bar{y}} \cdot \overline{w\bar{y}z}}$ (2 niveles)
- $g = \bar{w}y\bar{z} + \bar{x}yz + wx\bar{z} + w\bar{y}z$

(... hay más opciones, todas de 4 términos con 3 literales y todos los literales negados)

c) $h(a,b,c,d) = \prod_M (3,4,5,8,10,11,12) = \sum_m (0,1,2,6,7,9,13,14,15)$



hay muchas opciones

$h = bc + \bar{a}\bar{b}\bar{c} + \bar{a}c\bar{d} + a\bar{c}d = \overline{bc \cdot \overline{\bar{a}\bar{b}\bar{c}} \cdot \overline{\bar{a}c\bar{d}} \cdot \overline{a\bar{c}d}}$

$h = bc + \bar{a}\bar{b}\bar{d} + \bar{b}\bar{c}d + abd$