K-Map

K-MAP →
- Cost ✓
- Easy ✓
- Sysmetic Method ✓

Cost ↓

→ literals ↓ (2) SOP & POS $(xy)(y+z)$

→ Irreducable → expression Reduce ↓

→ Irredundant → expression redundant ✗

Q → $x\bar{y}z + xyz + yzx +$

→ 5 Variable →

→ A ← Q → B $x\bar{y}+\bar{y}z$

→ $(xy+z)$

$\{ xy + yz, xy + xz, x\bar{y} + \bar{z}x \}$ $xz + y$

$xywz$

4 Variable

wz \ xy	$\bar{x}\bar{y}$ 00	$\bar{x}y$ 01	xy 11	$x\bar{y}$ 10
$\bar{w}\bar{z}$ 00	0	1	3	2
$\bar{w}z$ 01	4	5	7	6
wz 11	12	13	15	14
$w\bar{z}$ 10	8	9	11	10

$0110 \to 6$

$\Sigma(0,1,5,7)$

$f = (\bar{x}\bar{y}\bar{z}\bar{w}) + (\bar{x}\bar{y}zw)$

2 Variable (xy)

y \ x	0	1
0	0	1
1	2	3

2 Variable

z \ xy	$\bar{x}\bar{y}$ 00	01	11	10
$\bar{z}$ 0	0	1	3	2
z 1	4	5	7	6

xyz

$2^3 = 8$

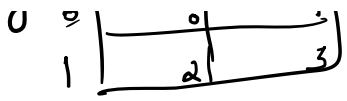
00, 01, 11, 10, 00

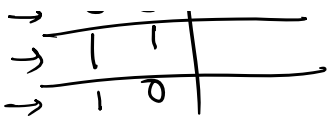
zxy
- 000 → 0
- 001 → 1
- 011 → 3
- 010 → 2
- 111 → 7

2^n 3 Variable

(0 - 7) 000 ← 001 ←

x	y
0	1
0	0
1	1
1	0





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