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1/ Favour Qubits with same value

x	y	$ax+by+cxy+d$		
0	0	0	$d=0$	①
0	1	1	$b+d=1$	②
1	0	1	$a+d=1$	③
1	1	0	$a+b+c+d=0$	④

Substitute x, y, into above

① in ④	$a+b+c=0$	⑤	
① in ②	$b+0=1$	⑥	$\Rightarrow b=1$
① in ③	$a+0=1$	⑦	$a=1$
⑥, ⑦ in ⑤	$1+1+c=0$	$\Rightarrow$	$c=-2$

$\Rightarrow$ objective $= ax+by+cxy+d$

$= x+by+-2xy$

2/ Manual computation

x	y	$x+y-2xy$
0	0	0
0	1	1
1	0	1
1	1	0

Slide 21

3/ Favour Qubits with different value

x	y	$ax+by+cxy+d$	Equation	
0	0	1	$d=1$	①
0	1	0	$b+d=0$	②
1	0	0	$a+d=0$	③
1	1	1	$a+b+c+d=1$	④

① in ② $\quad b+1=0 \Rightarrow b=-1$

① in ③ $\quad a+1=0 \Rightarrow a=-1$

④ $\Rightarrow \quad -1-1+c+1=1 \Rightarrow c=2$

Objective $= ax+by+cxy+d$

$= -x-y+2xy+1$

4/ Manual computation

x	y	$-x-y+2xy+1$
0	0	1
0	1	0
1	0	0
1	1	1