A	B	C	X	Y	
0	0	0	1	1	1
0	0	1	1	1	2
0	1	0	0	1	3
0	1	1	0	0	4
1	0	0	1	1	5
1	0	1	0	0	6
1	1	0	0	1	7
1	1	1	0	0	8

$$X = (\bar{A}\cdot\bar{B}\cdot\bar{C})_1 + (\bar{A}\cdot\bar{B}\cdot C)_2 + (A\cdot\bar{B}\cdot\bar{C})_5$$

$$Y = (\bar{A}\cdot\bar{B}\cdot\bar{C})_1 + (\bar{A}\cdot\bar{B}\cdot C)_2 + (\bar{A}\cdot B\cdot\bar{C})_3 + (A\cdot\bar{B}\cdot\bar{C})_5 + (A\cdot B\cdot\bar{C})_7$$

$(\Leftrightarrow)$ $X = \bar{B}\cdot\left((\bar{A}\cdot\bar{C}) + (\bar{A}\cdot C) + (A\cdot\bar{C})\right)$ distributive law

$= \bar{B}\cdot(\bar{A}\cdot(\bar{C}+C) + (A\cdot\bar{C}))$ distributive law

$= \bar{B}\cdot(\bar{A}\cdot 1 + A\cdot\bar{C})$ inverse law

$= \bar{B}\cdot(\bar{A} + A\cdot\bar{C})$ identity law

$(\Leftrightarrow)$ $Y = (\bar{A}\cdot\bar{B})\cdot(\bar{C}+C) + (\bar{A}\cdot B\cdot\bar{C}) + (A\cdot\bar{C})\cdot(\bar{B}+B)$

distributive law

$= (\bar{A}\cdot\bar{B})\cdot 1 + (\bar{A}\cdot B\cdot\bar{C}) + (A\cdot\bar{C})\cdot 1$ inverse law

$= \bar{A}\cdot\bar{B} + \bar{A}\cdot B\cdot\bar{C} + A\cdot\bar{C}$ identity law