



$(\overline{x}\overline{y})$ $(\overline{x}z)$ $(\overline{y}z)$

①

②

x	y	z	\overline{y}	$\overline{x}\overline{y}$	$\overline{y}z$	$\overline{x}z$	$\overline{y}\overline{z}$	$\overline{y}z$	$\overline{x}\overline{z}$
0	0	0	1	0	0	0	0	✓	
0	0	1	1	0	0	0	0	✓	
0	1	0	0	0	0	0	0	✓	
0	1	1	0	0	0	0	0	✓	
1	0	0	1	1	0	1	1	✓	
1	0	1	1	1	1	1	0	✓	
1	1	0	0	0	0	0	0	✓	
1	1	1	0	0	1	1	1	✓	

$\bar{X} + (\bar{Y}\bar{Z}) + (Z\bar{X})$									
			①		②		③		
X	Y	Z	\bar{X}	\bar{Z}	$\bar{Y}\bar{Z}$	$Z\bar{X}$	① + ② + ③		
0	0	0	1	1	0	0	1	✓	
0	0	1	1	0	0	1	1	✓	
0	1	0	1	1	1	0	1	✓	
0	1	1	1	0	0	1	1	✓	
1	0	0	0	1	0	0	0	✓	
1	0	1	0	0	0	0	0	✓	
1	1	0	0	1	1	0	1	✓	
1	1	1	0	0	0	0	0	✓	

$$F = (X \oplus Y) + (Z \cdot Y)$$

①

②

X	Y	Z	X ⊕ Y	Z · Y	① + ②
0	0	0	0	0	✓
0	0	1	0	0	✓
0	1	0	1	0	✓
0	1	1	1	1	✓
1	0	0	1	0	✓
1	0	1	1	0	✓
1	1	0	0	0	✓
1	1	1	0	1	✓

$$X \oplus Z + \bar{X}$$

①

②

X	Y	Z	\bar{X}
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	1
1	1	1	0

X	Y	Z	\bar{X}
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	0
1	0	0	0
1	0	1	0
1	1	0	0
1	1	1	0

① + ②

1	✓
1	✓
1	✓
0	✓
1	✓
1	✓
0	✓
1	✓