

$$④ f(x,y,z) = \bar{y} + \bar{x}\bar{z} + xz$$

x	y	z	$f(x,y,z)$
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	1

$$f(x,y,z) = \sum m(0,1,2,4,5,7) =$$

$$= \bar{x}\bar{y}\bar{z} + \bar{x}\bar{y}z + \bar{x}y\bar{z} + xy\bar{z} + x\bar{y}z + xyz$$

$$= x(f(1,y,z)) + \bar{x}(f(0,y,z)) =$$

$$= x(\bar{y}\bar{z} + \bar{y}z + yz) + \bar{x}(\bar{y}\bar{z} + \bar{y}z + y\bar{z}) =$$

$$= y(f(x,1,z)) + \bar{y}(f(x,0,z)) =$$

$$= y(xz + \bar{x}\bar{z}) + \bar{y}(\underbrace{x(\bar{z}+z)}_1 + \bar{x}(\bar{z}+z)) =$$

$$= y(xz + \bar{x}\bar{z}) + \bar{y}(\underbrace{x + \bar{x}}_1) =$$

$$y(xz + \bar{x}\bar{z}) + \bar{y} = (\underbrace{y + \bar{y}}_1)(xz + \bar{x}\bar{z} + \bar{y}) =$$

$$= \underbrace{\bar{y} + \bar{x}\bar{z}}_{1} + xz \quad \square.$$