

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

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

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

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

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

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

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

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

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

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