

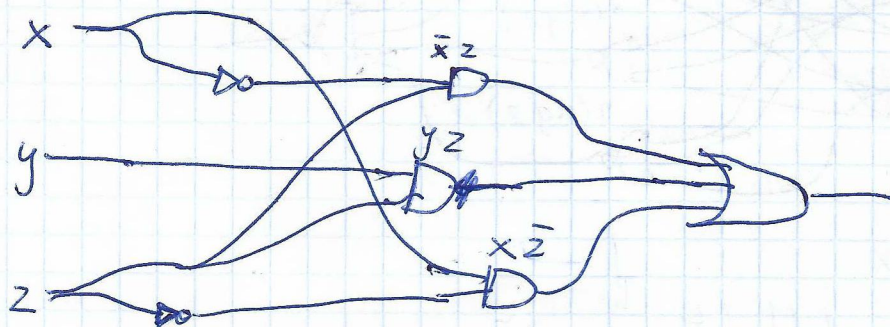
$$\begin{aligned}
 1. \quad & x\bar{y}\bar{z} + x y u + x\bar{y}z\bar{u} \equiv x'(\bar{y}\bar{z} + y u + \bar{y}z\bar{u}) \equiv \\
 & \equiv x(y u + \bar{y}(\bar{z} + \bar{u}z)) \equiv x(y u + \bar{y}(\bar{z}\bar{u} + \bar{z}\bar{u} + \bar{z}\bar{u} + \bar{z}\bar{u})) \equiv \\
 & \equiv x(y u + \bar{y}(\bar{z} + \bar{u})) \equiv x(y u + \bar{y}\bar{z} + \bar{y}\bar{u}) \equiv \\
 & \equiv \underline{x y u + x \bar{y} \bar{z} + x \bar{y} \bar{u}}
 \end{aligned}$$

$$\begin{aligned}
 2. \quad & (x+z+w)(x+\bar{y}+z)(x+\bar{y}+\bar{z}+w) \equiv (\bar{x}\bar{z}\bar{u})(\bar{x}y\bar{z})(\bar{x}y z\bar{u}) \equiv \\
 & \equiv \neg((\bar{x}\bar{z}\bar{u}) + (\bar{x}y\bar{z}) + (\bar{x}y z\bar{u})) \equiv \neg(\bar{x}(\bar{z}\bar{u} + y\bar{z} + y z\bar{u})) \equiv \neg(\bar{x}(\bar{z}\bar{u} + y(\bar{z} + z\bar{u}))) \equiv \\
 & \equiv \neg(\bar{x}(\bar{z}\bar{u} + y(\bar{z}\bar{u} + \bar{z}\bar{u} + \bar{z}\bar{u} + \bar{z}\bar{u}))) \equiv \neg(\bar{x}(\bar{z}\bar{u} + y(\bar{z} + \bar{u}))) \equiv \\
 & \equiv \neg(\bar{x}(\bar{z}\bar{u} + y\bar{z} + y\bar{u})) \equiv \neg(\bar{x}\bar{z}\bar{u} + \bar{x}y\bar{z} + \bar{x}y\bar{u}) \equiv \underline{\neg(\bar{x}\bar{z}\bar{u} + \bar{x}y\bar{z} + \bar{x}y\bar{u})} \\
 & \equiv \underline{(x+z+w)(x+\bar{y}+z)(x+\bar{y}+w)}
 \end{aligned}$$

$$3. \quad f(x, y, z) = \sum m(1, 3, 4, 6, 7)$$

	y z			
	00	01	11	10
x	0	1	1	0
1	1	0	1	1

$$\bar{x}z + yz + x\bar{z}$$



$$4. \quad f(x, y, z) = \prod M(0, 2, 5)$$

	y z			
	00	01	11	10
x	0	1	1	0
1	1	0	1	1

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

