

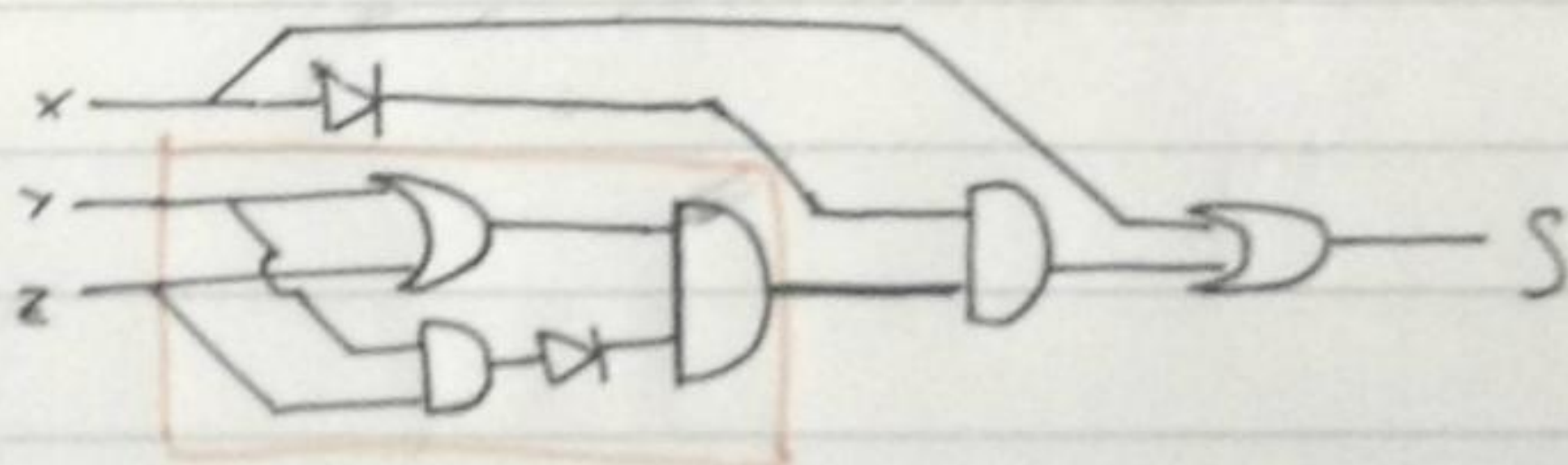
x	y	S	a
0	0	0	0
0	1	1	0
1	0	1	0
1	1	0	1

x	y	z	S	a
0	0	0	0	0
0	0	1	1	0
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	1
1	1	0	0	1
1	1	1	1	1

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

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

$$\begin{aligned} S(xyz) &= \bar{x}\bar{y}z + \bar{x}y\bar{z} + x\bar{y}\bar{z} + xyz = \bar{x}\bar{y}z + \bar{x}y\bar{z} + x \cdot (\bar{y}z + y\bar{z}) \\ &= \bar{x}(\bar{y}z + y\bar{z}) + x = \bar{x} \cdot ((y+z) \cdot (\bar{y} + \bar{z})) + x = \bar{x} \cdot ((y+z) \cdot \overline{yz}) + x \end{aligned}$$



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

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

$$(x+y+z) \cdot \overline{xyz} + xyz$$

