

Aufgabe 11)

a) $2^3 = 8 \Rightarrow 3 \text{ Kabel} + 1 \text{ Massekabel} = 4 \text{ Kabel}$

b)
$$z = (wvxv\bar{y}) \wedge (wv\bar{x}v\bar{y}) \wedge (\bar{w}v\bar{x}v\bar{y}) =$$

$$= \bar{y}v[(wvx) \wedge (wv\bar{x}) \wedge (\bar{w}v\bar{x})] =$$

$$= \bar{y}v[(wv(x \wedge \bar{x})) \wedge (\bar{w}v\bar{x})] =$$

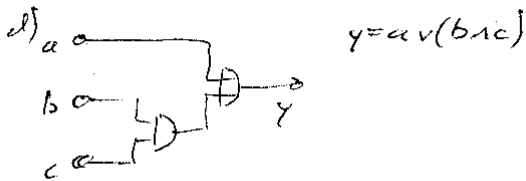
$$= \bar{y}v[w \wedge (\bar{w}v\bar{x})] =$$

$$= \bar{y}v[(w \wedge \bar{w}) \vee (w \wedge \bar{x})] =$$

$$= \bar{y}v(w \wedge \bar{x})$$

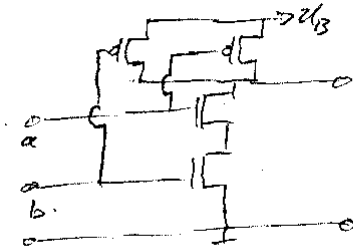
c)

a	b	c	y
0	0	0	0
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	1

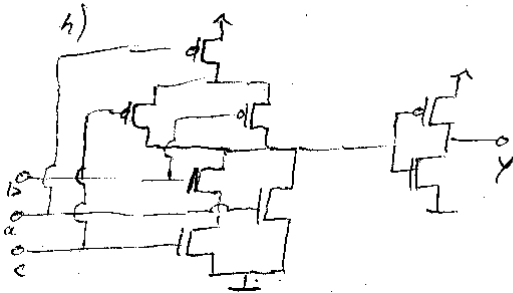


e) $y = \overline{a \vee (b \wedge c)} = \overline{\bar{a} \wedge (b \wedge c)} = \overline{\bar{a} \wedge b \wedge c}$

f)



g) bei Teilaufgabe d): 12 Transistoren
 bei Teilaufgabe e): 12 Transistoren



i) 8 Transistoren bei Teilaufgabe h)