

1:

b c a b a b c c a c

$$L = \{ w \in \{a, b, c\}^* \mid$$

$$w = 2a \times c$$

$$(c - |c|) (|c| - a.2)$$

$$|c| \cdot "c" + 2 \cdot |c| \cdot "a"$$

$$1 \quad c_i \perp |xx$$

$$6 \quad a; x | xxx$$

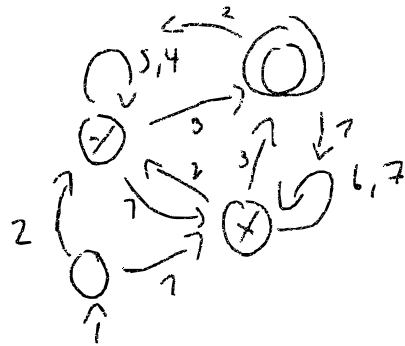
$$2 \quad a. \perp |y$$

$$7 \quad c, x | \epsilon$$

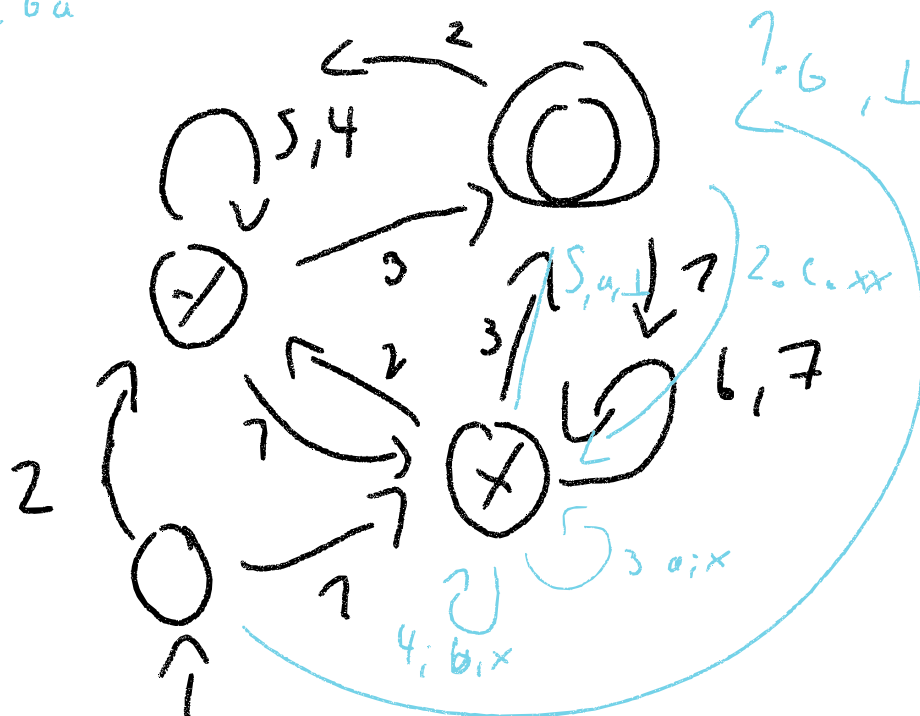
$$3 \quad \{a_i \perp | c$$

$$4 \quad c \times | x$$

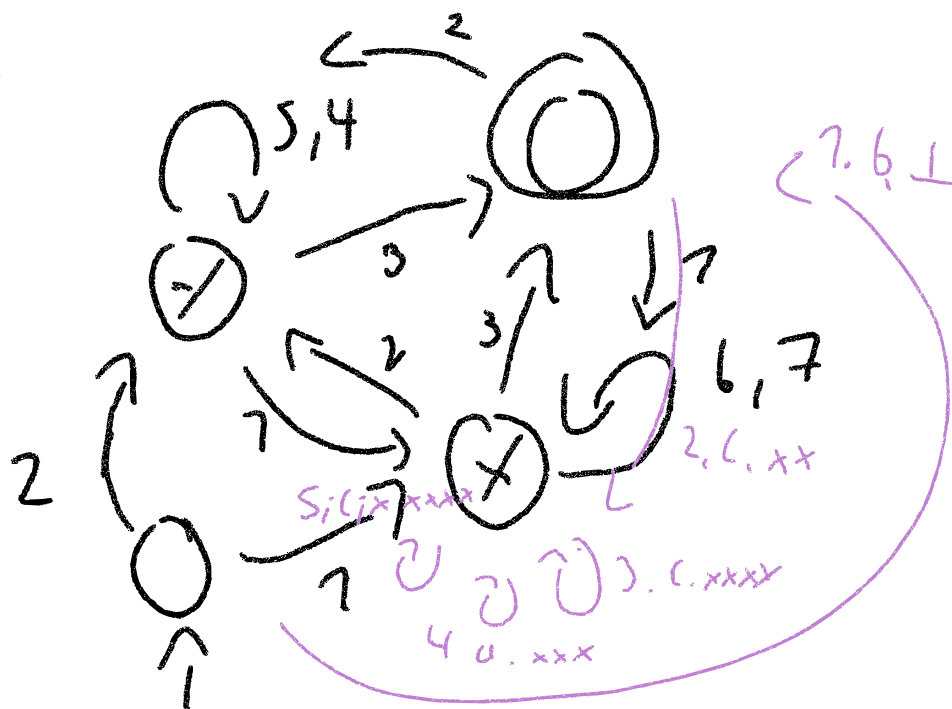
$$5 \quad a. y | yy$$



6caba

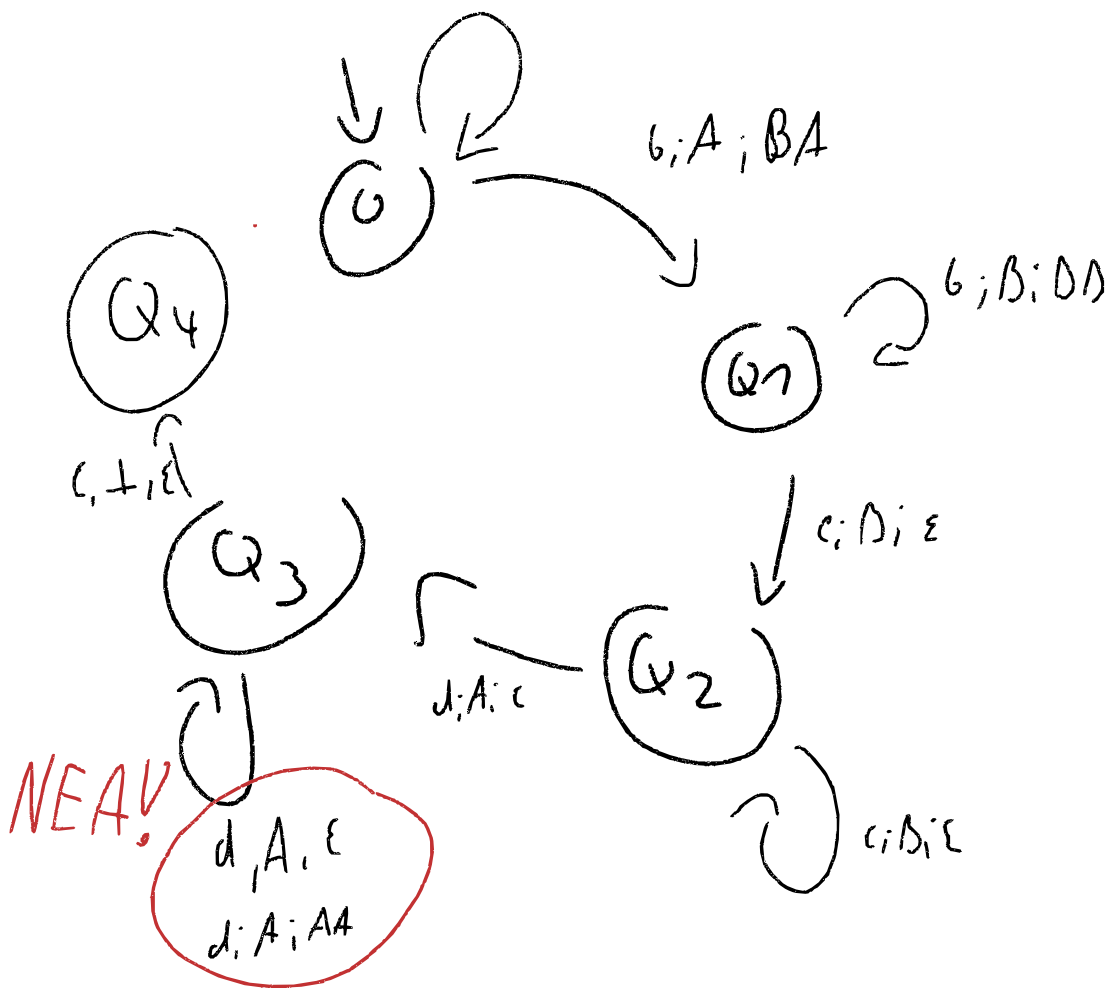


6cccc



$$2: \quad \underline{L = \{ |b| = |c| \mid |a| \leq |d| \}}$$

$$u, A, A \perp \mid a; \perp; AA$$



$$Q = \{Q_0; Q_1; Q_2; Q_3; Q_4\} \quad \{a \in Q \mid Q_0\}$$

$$\Sigma = \{a; b; \varepsilon; c\} \quad \{z_0 = \perp\}$$

$$\Gamma = \{A; B; \perp\}$$

$$\delta = \{\text{Aufgabe}\}$$

$$\neq \{Q_4\}$$

3:

$$G = (V, \Sigma, P, S)$$

V: Nicht-Terminal

$\Sigma$ : Terminalsymbole

P: Produktionsregel

S: Startsymbol

$$G(\{ \text{Statement}; \text{Condition}, \dots \}, \{ \text{"if"}, \text{"else"}, \dots \}, P, \text{Statement})$$

$$P = \{ \text{Statement} \rightarrow \text{"if"} \text{Condition Statement} \mid \text{"if"} \text{Condition Statement} \text{"else"} \text{Statement} \\ \text{Condition} \rightarrow \dots$$

$$L(G) = \{ (\text{"if"} \mid S(\text{"else"} \mid S))^+ \}$$

$$(\text{if} \dots (S) \mid \text{if} \dots \text{else} \dots (S))$$

Mehrdarigkeit, da  $L = P$  ist, da  $S$  nicht  
unpdefiniert bzw endet,  $S$  bleibt immer

(Mehrdarigkeit ist durch Zeichen)

if (id) else      2x Lösung 2x Wege  
if (id else)

4:

$$L = \{ a^i b^j c^k \mid i=j \vee j=k \}$$

oder

$$S = A b B c \mid a c b D$$

Mehrdewig

$$A = a \mid A a \mid \epsilon$$

$$B = b c \mid b B c \mid \epsilon$$

$$C = a c b \mid a b \mid \epsilon$$

$$D = D c \mid \epsilon$$

$$A b B c$$

$$a c b D$$