

Theoretische Informatik
Aufgabenblatt 3 Lösung

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1 Aufgabe 1

$$L(r_1) = \{adaeb \mid d \in \{b, c\} e \in \{c, a\}\}$$

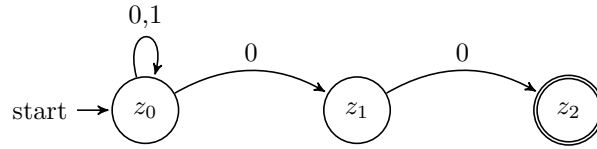
$$L(r_2) = \{(x^2)^* c^* \vee c \mid x \in \{a, b\}\}$$

$$L(r_3) = \{xa^* \mid x \in \{b, \varepsilon\}\}$$

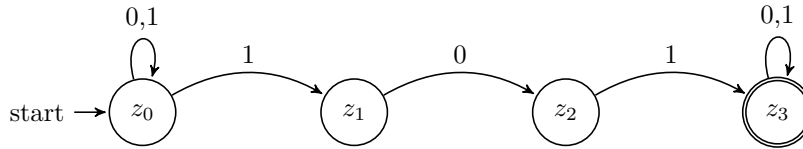
Weil die gleichen eingaben zu verschiedenen Ergebnissen Ergebnissen fuhren koennen.

b)

A1:



A2:



c)

$$L_{NEA}(A1) = \{\omega 01 \mid \omega \in \{0, 1\}^*\}$$

$$L_{NEA}(A2) = \{\omega^* 101 \omega^* \mid \omega \in \{0, 1\}^*\}$$

d)

A1:

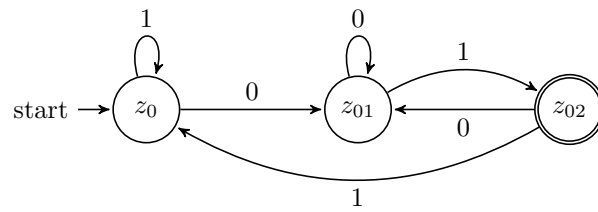
	0	1
z_0	z_{01}	z_0
z_{01}	z_{01}	z_{02}
z_{02E}	z_{01}	z_0

A2:

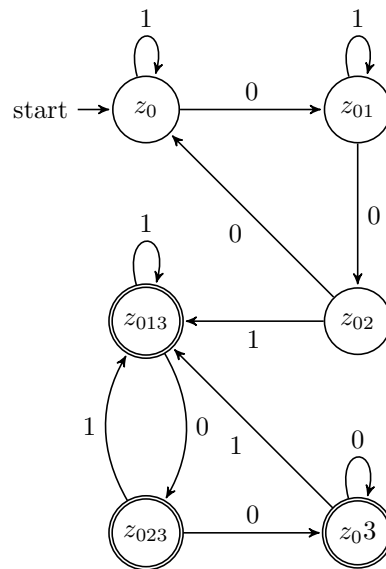
	0	1
z_0	z_0	z_{01}
z_{01}	z_{02}	z_{01}
z_{02}	z_0	z_{013}
z_{013E}	z_{023}	z_{013}
z_{023E}	z_{03}	z_{013}
z_{03E}	z_{03}	z_{013}

Minimiert:		
	0	1
z_0	z_0	z_{01}
z_{01}	z_{02}	z_{01}
z_{02}	z_0	z_{013}
z_{0123E}	z_{0123}	z_{0123}

A1:



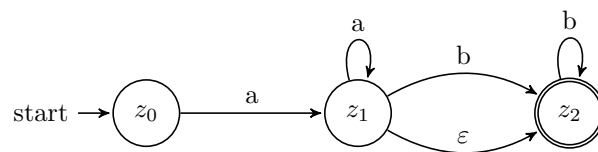
A2:



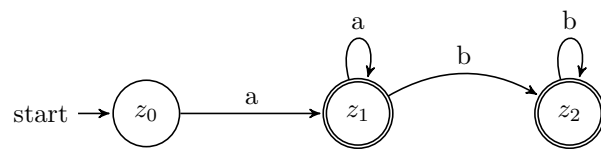
2 Aufgabe 2

a)

$$L = \{aa^{nb^m} \mid n, m \geq 0\}$$



b) NEA:



DEA:

