HW1.

1.1

a. M1: q_1, M2: q_1

b. M1: q_2, M2: q_1, q_4

c. M1: $q_1 \xrightarrow{a} q_2 \xrightarrow{a} q_3 \xrightarrow{b} q_1 \xrightarrow{b} q_1$, M2: $q_1 \xrightarrow{a} q_1 \xrightarrow{a} q_1 \xrightarrow{b} q_2 \xrightarrow{b} q_4$

d. M1 不接受, M2 接受

1.2

M1: $Q = \{q_1, q_2, q_3\}$ $\Sigma = \{a, b\}$. start state $= q_1$ $F = q_2$

$\delta(q_1, a) = q_2$ $\delta(q_3, a) = q_2$

$\delta(q_1, b) = q_1$ $\delta(q_3, b) = q_1$

$\delta(q_2, a) = q_3$

$\delta(q_2, b) = q_3$

M2: $Q = \{q_1, q_2, q_3, q_4\}$ $\Sigma = \{a, b\}$. start state $= q_1$ $F = \{q_1, q_4\}$.

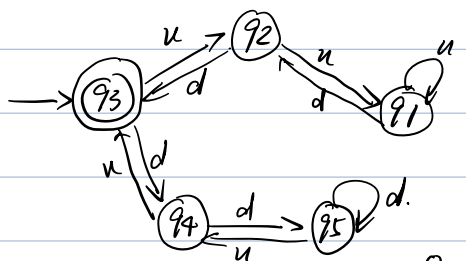
$\delta(q_1, a) = q_1$ $\delta(q_3, a) = q_2$

$\delta(q_1, b) = q_2$ $\delta(q_3, b) = q_1$

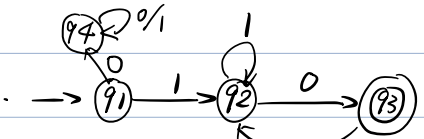
$\delta(q_2, a) = q_3$ $\delta(q_4, a) = q_3$

$\delta(q_2, b) = q_4$ $\delta(q_4, b) = q_4$

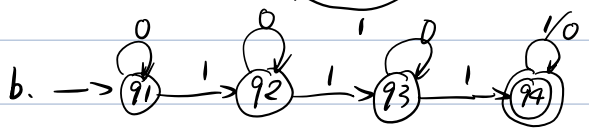
1.3



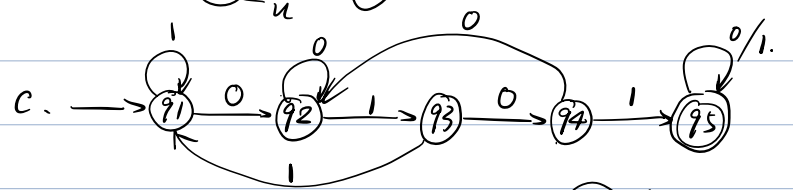
1.4 a.



b.



c.



d.