01

1

1.

$\epsilon, a, aa, aaa, aaaa, aaaaa$

2.

$aaa, aab, aba, abb, baa, bab, bba, bbb$

3.

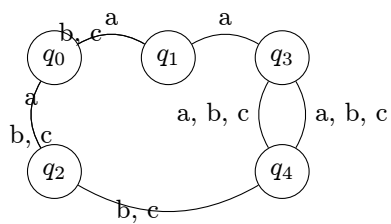$ab, aabb, aababb, aabababb$

2

…

3

1

2.

ϵ

$q_0 \xrightarrow{\epsilon} q_0$

$abab$

$q_0 \xrightarrow{a} q_1 \xrightarrow{b} q_4 \xrightarrow{a} q_3 \xrightarrow{b} q_4$

abbaa

$q_0 \xrightarrow{a} q_1 \xrightarrow{b} q_0 \xrightarrow{b} q_2 \xrightarrow{a} q_0 \xrightarrow{a} q_1$

caaa

$q_0 \xrightarrow{c} q_2 \xrightarrow{a} q_0 \xrightarrow{a} q_1 \xrightarrow{a} q_3$

3.

$L(B) = \{w_1, \ldots, w_n \mid n \geq 0, w_n \in \{ab, ac, ba, ca\}\}$

4.