

3

3.1

3.2

3.3

x	q_0	q_1	
a	q_0	q_1	
b	q_1	\perp	
c	\perp	q_0	
aa	q_0	q_1	same as a
ab	q_1	\perp	same as b
ac	\perp	q_0	same as c
ba	q_1	\perp	same as b
bb	\perp	\perp	
bc	q_0	\perp	
ca	\perp	q_0	same as c
cb	\perp	q_1	
cc	\perp	\perp	same as bb
\vdots	\vdots	\vdots	

From the table we compute $S(M) = \{[a], [b], [c], [b^2], [bc], [cb]\}$. Suppose $S(M)$ is a group with $u, v \in \Sigma^*$, $\delta_u, \delta_v \in \langle \mathcal{F}(M) \rangle$ then there exists for an arbitrary but fixed δ_u another δ_v with $\delta_u \delta_v = id_Q$. Notice we can choose $q_1 \delta_b = \perp$ and we cannot find any δ_v with $\perp \delta_v = q_1$. Therefore $S(M)$ is not a group. \square

3.4