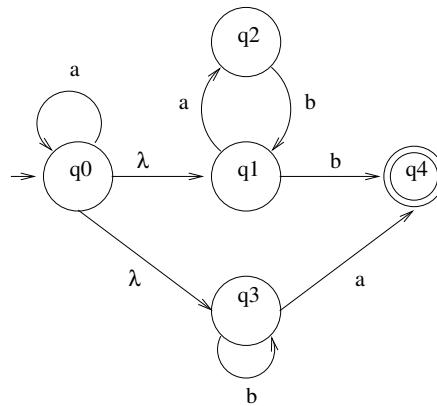


The answers must be the original work of the author. While discussion with others is permitted and encouraged, the final work should be done individually. You are not allowed to work in groups. You are allowed to build on the material supplied in the class. Any other source must be specified clearly.

1. (30+70 points) Let  $M_2$  be the following NFA- $\lambda$ :



(a) Give the transition function  $t$  for  $M_2$  in tabular form. Include a column for the  $\lambda$ -closure of each state.

(b) Use algorithm 5.6.3 to construct a state diagram of a DFA that is equivalent to  $M_2$ . Give the transition function and draw the state diagram of the equivalent DFA.