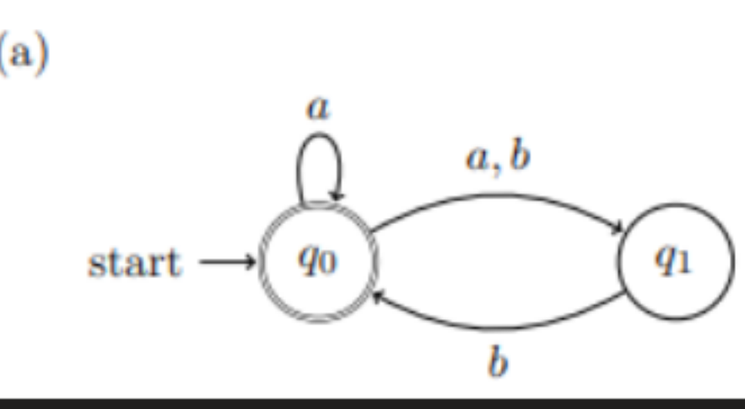
Ex.5a - Determinização de AFNs

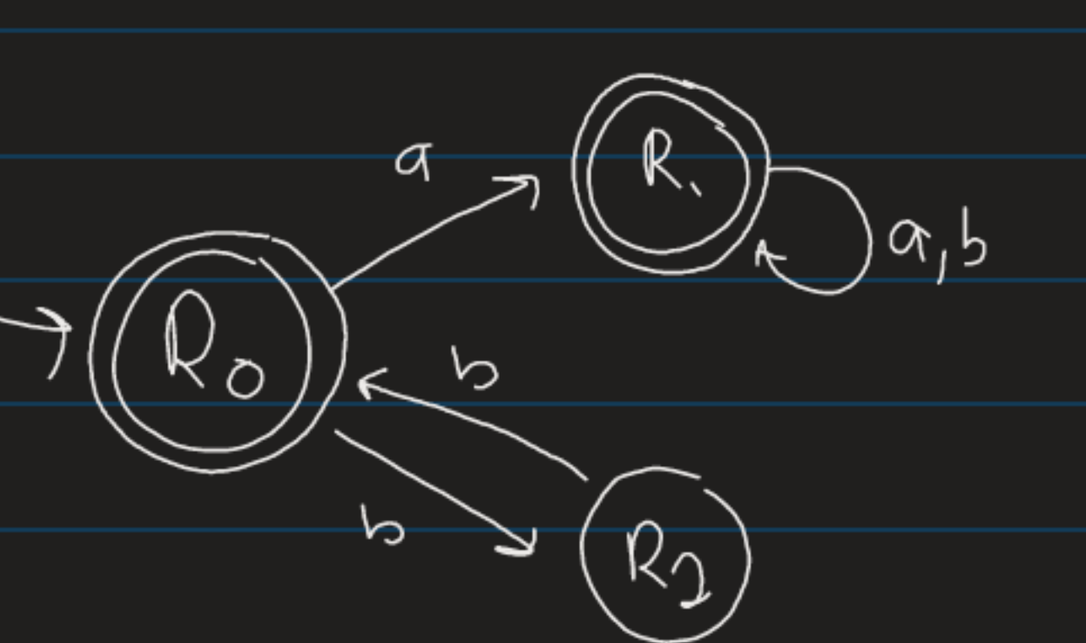
14 de abril de 2024 20:07

1. Usando o algoritmo de Rabin-Scott dado em aula, determinize, justificando, os seguintes AFNs:

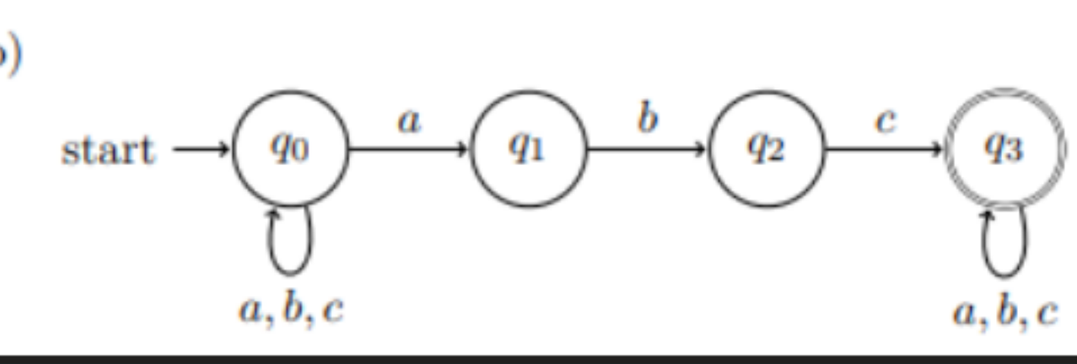
(a)



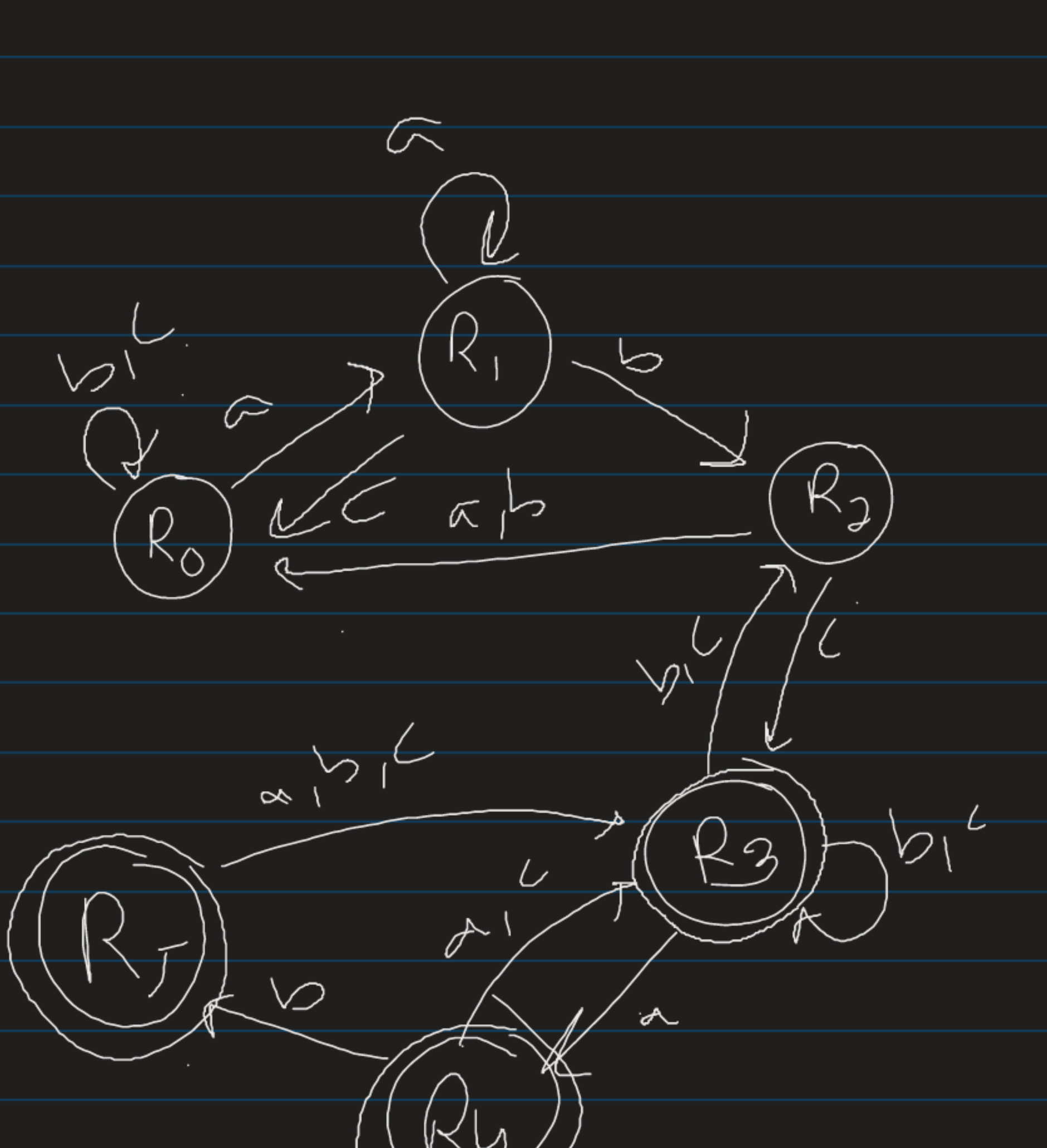
$close_\varepsilon(\{q_0\}) = \{q_0\} = R_0$
$close_\varepsilon(Reach_a(R_0)) = close_\varepsilon(\{q_0,q_1\}) = \{q_0,q_1\} = R_1$
$close_\varepsilon(Reach_b(R_0)) = close_\varepsilon(\{q_1\}) = \{q_1\} = R_2$
$close_\varepsilon(Reach_a(R_1)) = close_\varepsilon(\{q_0,q_1\}) = \{q_0,q_1\} = R_1$
$close_\varepsilon(Reach_b(R_1)) = close_\varepsilon(\{q_0,q_1\}) = \{q_0,q_1\} = R_1$
$close_\varepsilon(Reach_a(R_2)) = close_\varepsilon(\{q_1\}) = \bot$
$close_\varepsilon(Reach_b(R_2)) = close_\varepsilon(\{q_0\}) = \{q_0\} = R_0$



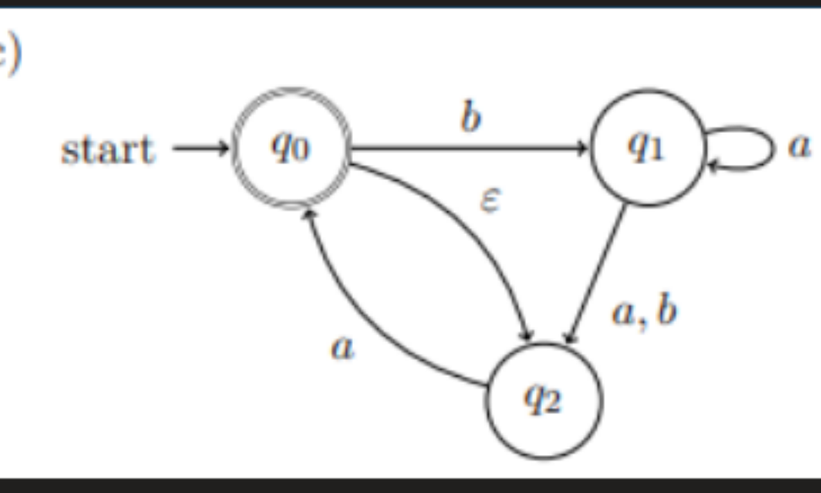
(b)



$close_\varepsilon(\{q_0\}) = \{q_0\} = R_0$
$close_\varepsilon(Reach_a(R_0)) = close_\varepsilon(\{q_0,q_1\}) = \{q_0,q_1\} = R_1$
$close_\varepsilon(Reach_b(R_0)) = close_\varepsilon(\{q_0\}) = \{q_0\} = R_0$
$close_\varepsilon(Reach_c(R_0)) = close_\varepsilon(\{q_0\}) = \{q_0\} = R_0$
$close_\varepsilon(Reach_a(R_1)) = close_\varepsilon(\{q_0,q_1\}) = \{q_0,q_1\} = R_1$
$close_\varepsilon(Reach_b(R_1)) = close_\varepsilon(\{q_0,q_2\}) = \{q_0,q_2\} = R_2$
$close_\varepsilon(Reach_c(R_1)) = close_\varepsilon(\{q_0\}) = \{q_0\} = R_0$
$close_\varepsilon(Reach_a(R_2)) = close_\varepsilon(\{q_0\}) = \{q_0\} = R_0$
$close_\varepsilon(Reach_b(R_2)) = close_\varepsilon(\{q_0\}) = \{q_0\} = R_0$
$close_\varepsilon(Reach_c(R_2)) = close_\varepsilon(\{q_0,q_3\}) = \{q_0,q_3\} = R_3$
$close_\varepsilon(Reach_a(R_3)) = close_\varepsilon(\{q_0,q_1,q_3\}) = \{q_0,q_1,q_3\} = R_4$
$close_\varepsilon(Reach_b(R_3)) = close_\varepsilon(\{q_0,q_3\}) = \{q_0,q_3\} = R_3$
$close_\varepsilon(Reach_c(R_3)) = close_\varepsilon(\{q_0,q_3\}) = \{q_0,q_3\} = R_3$
$close_\varepsilon(Reach_a(R_4)) = close_\varepsilon(\{q_0,q_3\}) = \{q_0,q_3\} = R_3$
$close_\varepsilon(Reach_b(R_4)) = close_\varepsilon(\{q_0,q_2,q_3\}) = \{q_0,q_2,q_3\} = R_5$
$close_\varepsilon(Reach_c(R_4)) = close_\varepsilon(\{q_0,q_3\}) = \{q_0,q_3\} = R_3$
$close_\varepsilon(Reach_a(R_5)) = close_\varepsilon(\{q_0,q_3\}) = \{q_0,q_3\} = R_3$
$close_\varepsilon(Reach_b(R_5)) = close_\varepsilon(\{q_0,q_3\}) = \{q_0,q_3\} = R_3$
$close_\varepsilon(Reach_c(R_5)) = close_\varepsilon(\{q_0,q_3\}) = \{q_0,q_3\} = R_3$

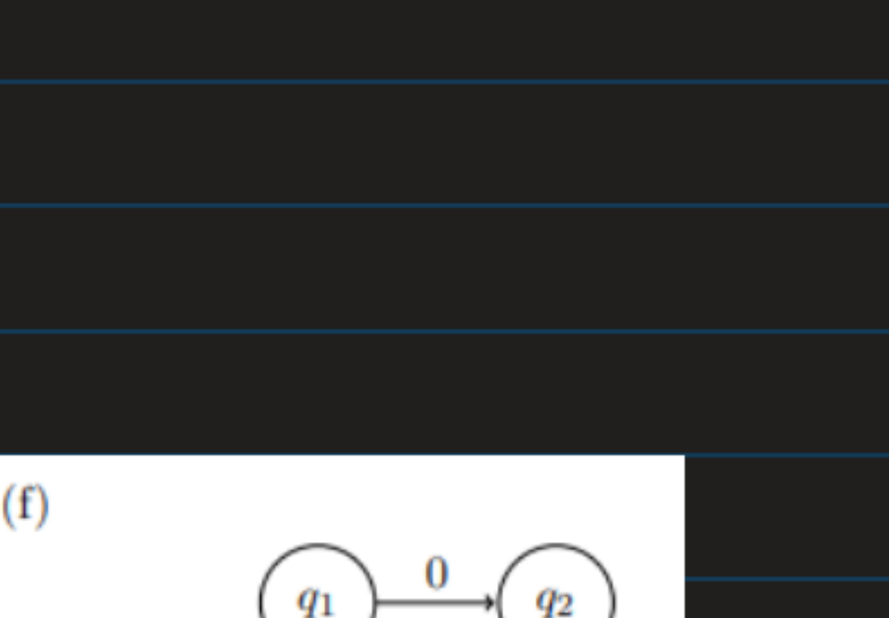


(c)

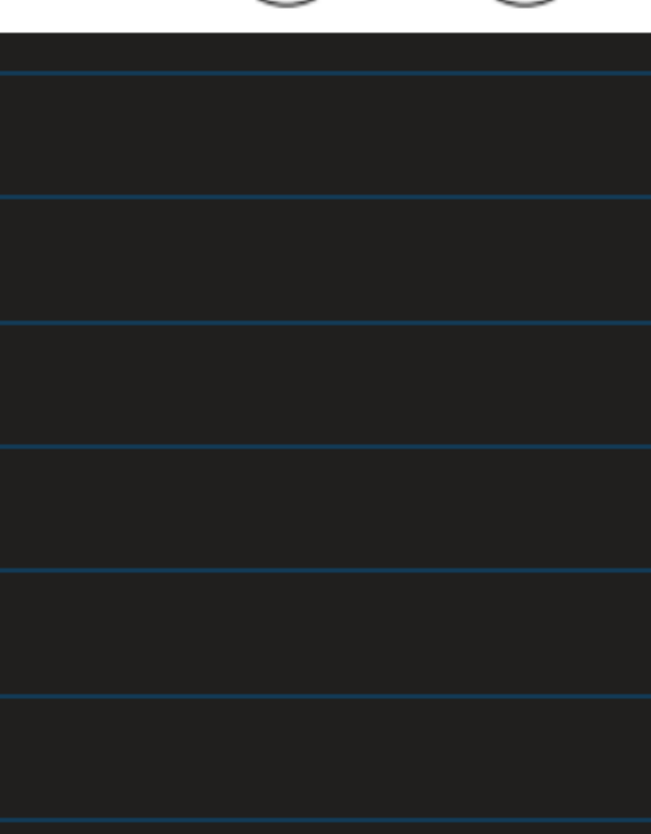


$close_\varepsilon(\{q_0\}) = \{q_0,q_2\} = R_0$
$close_\varepsilon(Reach_a(R_0)) = close_\varepsilon(\{$
$close_\varepsilon(Reach_b(R_0)) = \emptyset$

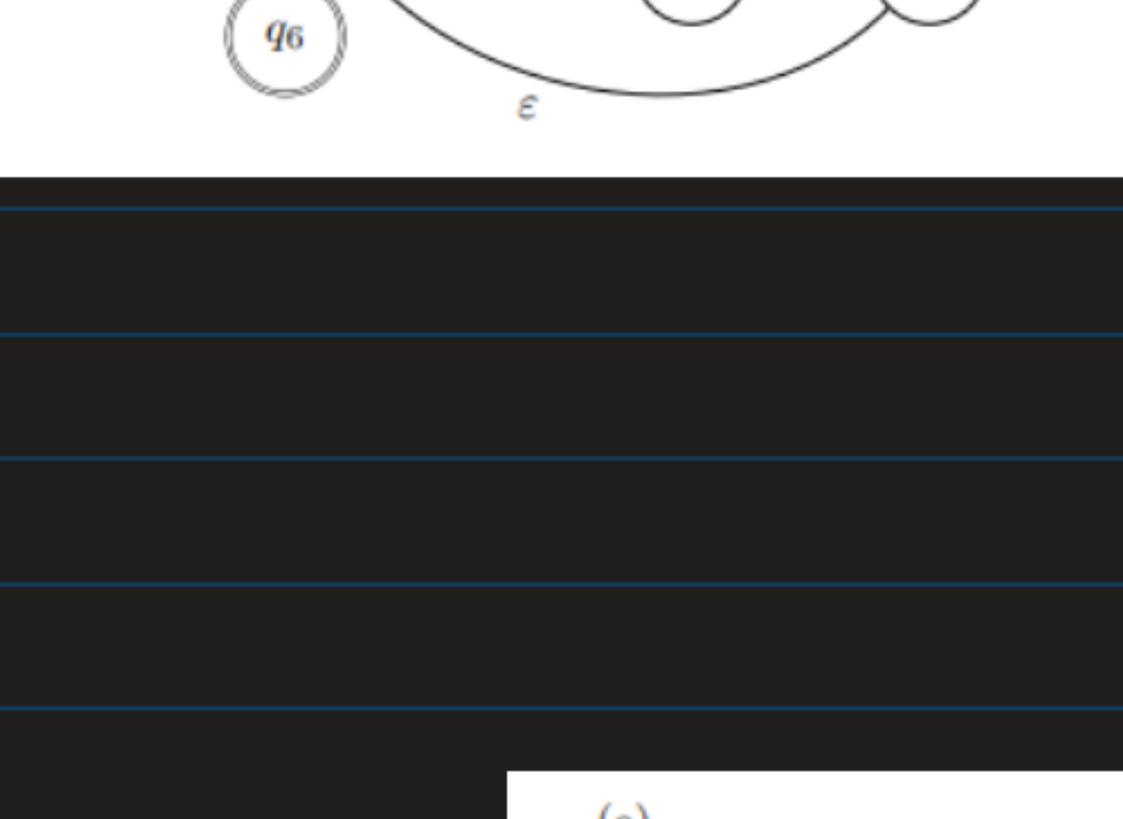
(d)



(f)



(g)



(e)