Question 1: Exercise 0.5

Question 2: Exercise 0.6

Question 3: Exercise 0.11 part b

Question 4: Problem 0.12

Question 5: Exercise 1.4 part a

Question 6: Exercise 1.6 part i, j

Part j has a number of states. As explained in the lecture notes, to make a DFA for a given problem, it is good to think about what each state means. For part j, explain what each state represents.

Question 7: Exercise 1.7

Part d, e, g, h

Question 8: Problem 1.36

For a given \( n \), give a construction of a DFA.

Question 9: Question 1.16 part b

Do not simply give me the resulting DFA, but show the steps involved in creating it, paralling the construction used in Theorem 1.39.

Question 10: Problem 1.31

Assume you have a DFA for \( A \). Show how you can alter it so that it recognizes \( A^R \). Is the resulting automata a DFA or a NFA and why?

Question 11: Problem 1.38

Hint: alter the construction of the DFA used in Theorem 1.39.

You do not need to prove that your construction is correct.