Theory of Computation
Homework 3, Spring 19.
Due date: Tuesday, February 19, 10:45am on NYU Classes

Chapter 2: Problem 1; Problem 2 parts vii,viii,xii,xv; Problem 3; Problem 4 parts i,iv,viii; Problem 5 parts i,iv.

Challenge problem. (Not for credit.)
Suppose that languages $A$ and $B$ are both recognized by DFAs. Give a direct construction, i.e. without using NFAs, to show that $A \circ B$ is also recognized by a DFA. Hint: What do you need to remember as the input is being read?
Now give an analogous construction to show $A^*$ can be recognized by a DFA.