1. Give a regular expression, simplified to the best of your abilities, for the language of all strings of a’s, b’s, and c’s where a is never immediately followed by b.

2. Give a regular expression, simplified to the best of your abilities, for the language of all strings of a’s, b’s, and c’s that contain an even number of b’s.

3. Simplify (if possible) the expression \((a+b+c)^*(a+b)^*\), then describe as concisely as you can in English the language it defines.

4. Simplify (if possible) the expression \((a+b)^*c^*(a+b)^*\), then describe as concisely as you can in English the language it defines.

5. Define a DFA, simplified to the best of your abilities, for the language of all strings of a’s, b’s, and c’s where a is never immediately followed by b.

6. Define a DFA, simplified to the best of your abilities, that recognizes the language

\[ L = \{ w \in \{a,b\}^* : |w|_a \mod 3 = 0 \}. \]