1. Draw a DFA that accepts all strings over $\{a, b\}$ that have at least three a's [1].

2. Draw a DFA that accepts all strings over $\{a, b\}$ that have at least two b's [1].

3. Draw a DFA that accepts all strings over $\{a, b\}$ that have exactly two a's [1].

4. Draw a DFA that accepts all strings over $\{a, b\}$ that have an odd number of a's [1].

5. Draw a DFA that accepts all strings over $\{a, b\}$ that have at least three a's and at least two b's [1].

6. Describe all of the above automata.

References

[1] Michael Sipser. *Introduction to the Theory of Computation.* International Thomson Publishing, 3rd edition, 1996.