Exercise sheet 8

1. Design a Turing machine over the alphabet $\{0, 1\}$, that accepts a string if it has an even number of 1s and rejects a string if it has an odd number of 1s.
2. Design a Turing machine over the alphabet $\{0, 1\}$, that shifts any string that is provided as input on the tape, one character to the right.
3. Given a finite state automaton that recognizes a language, how will you design a Turing machine that accepts each string that belongs to the language and rejects each string that does not belong to the language. As usual, the string is entered as input by writing it on the tape.