Question 3:

a. The set of strings of 0’s and 1’s such that the string starts with 01, contains even number of blocks of 0’s, at least 2 blocks, each block of 0’s is followed by a 1, and the number of 0’s in one block is always one greater than the number of 0’s in previous block.

b. Even

c. \( \{0^n10^{n+1} | n \geq 1\} \ast 0\ast 1 \ast 01 \ast 0^n10^{n+1} | n \geq 1\} \ast \)

d. \( \{0^n10^{2n} | n \geq 1\} \ast (\text{epsilon } + 0^*1) \ast 101 \ast 0^n10^{2n} | n \geq 1\} \ast (\text{epsilon } + 0^*1) \)