Discrete math

**1.DFA**

For each of the following languages, construct a DFA that accepts the language:

(a) The set of binary strings beginning with 010.

(b)The set of binary strings ending with 101.

(c)The set of binary strings beginning with 10 and ending with 01.

(d) The set of binary strings having a substring 010 or 101.

(e) The set of binary strings in which the last five symbols contain at most three 0’s.

(f) The set of binary strings in which ()()is divisible by 5, where ()is the number of occurrences of the symbolin string.

(g) The set of strings over the alphabet\*+in which the sum of all symbols is divisible by 5.

(h) The set of strings over the alphabet\*+which are the ternary expansions (base-3 representations) of positive integers which are congruent to 2 modulo 7.

(i) The set of binary strings in which every block of four symbols contains at least two 0’s.

(j) The set of binary strings in which every substrings 010 is followed immediately by substring 111.

3.как работает значок XOR в булевой алгебре по примеру

x XOR (yUz)=(x XOR y)U(x XOR z)

опровергнуть или доказать правдивость этого выражения

тремя способами 1)кругами эйлера 2)труз тейбл 3)по действиям

4.gcd

144 89

дискретка

1. DFA

2. Regular expressions

3. String

4. boolean expressions

5. combinatorics

6. Graphs

7. trees

8. XOR ТВОЮ МАТЬ

пп1

1. stl(map,set,vector,queue,multimap,makepair,dequeue)

2.conditional operators

3.iterators