



Gradiane Online Accelerated Learning

Zayd

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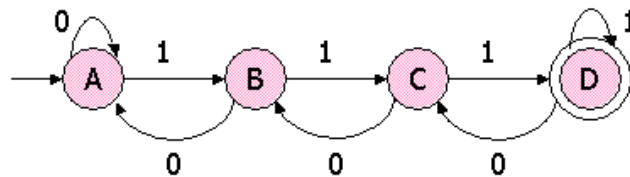
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Number of questions: 5
Positive points per question: 3.0
Negative points per question: 1.0
Your score: 15

Based on Section 2.2 of HMU.

Help

1. Examine the following DFA:



This DFA accepts a certain language L . In this problem we shall consider certain other languages that are defined by their tails, that is, languages of the form $(0+1)^*w$, for some particular string w of 0's and 1's. Call this language $L(w)$. Depending on w , $L(w)$ may be contained in L , disjoint from L , or neither contained nor disjoint from L (i.e., some strings of the form xw are in L and others are not).

Your problem is to find a way to classify w into one of these three cases. Then, use your knowledge to classify the following languages:

1. $L(1111001)$, i.e., the language of regular expression $(0+1)^*1111001$.
 2. $L(11011)$, i.e., the language of regular expression $(0+1)^*11011$.
 3. $L(110101)$, i.e., the language of regular expression $(0+1)^*110101$.
 4. $L(00011101)$, i.e., the language of regular expression $(0+1)^*00011101$.
- a) $L(110101)$ is disjoint from L .
 - b) $L(00011101)$ is disjoint from L .
 - c) $L(1111001)$ is disjoint from L .
 - d) $L(1111001)$ is contained in L .

Answer submitted: **c)**

You have answered the question correctly.

