Exercício 18

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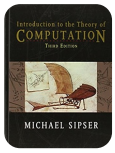

Introduction to the Theory of Computation

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Solução Certificado Solução fornecida há 1 ano

Passo 1

There are two ways to approach this Exercise: one is to write regular expressions directly, and other is to apply the procedure for converting NFAs to GNFAs and finally to regular expression. We choose the first way, because we are lazy. Regular expressions are given below.

Part a. : $1(0 \cup 1)^* 0$

Let's see what we've got here. String has to start with 1, so we put 1 on first place. Same goes for the end, where we put 0. In between them we can have any string, which is exactly what we write.

Part b. : $(0 \cup 1)^* 1(0 \cup 1)^* 1(0 \cup 1)^* 1(0 \cup 1)^*$

Part c. : $(0 \cup 1)^* 0101(0 \cup 1)^*$

Part d. : $(0 \cup 1)^2 0 (0 \cup 1)^*$

Part e. : $0 (0 \cup 1) ((0 \cup 1)^2)^* \cup 1 ((0 \cup 1)^2)^*$

Part f. : $0^*(100^*)^*1^*$

Part g. : $\bigcup_{k=0}^{5}(0 \cup 1)^k \backslash$

Part h. : $\varepsilon \cup (0 \cup 1) \cup (00 \cup 01 \cup 10) \cup (000 \cup 001 \cup 010 \cup 011 \cup 100 \cup 101 \cup 110) \cup (0 \cup 1)^4 (0 \cup 1)^*$

Part i. : $(10 \cup 11)(10 \cup 11)^*$

Part j. : $000^* \cup 1000^* \cup 0100^* \cup 0010^* \cup 000^*1$

Part k. : $\varepsilon \cup 0$

Part l. : $(001^* \cup 01^*0 \cup 1^*00)^* \cup (110^* \cup 10^*1 \cup 0^*11)$

Part m. : $\emptyset$

Part n. : $(0 \cup 1)(0 \cup 1)*$

Resultado 2 de 2

We write regular expressions directly.\

Avaliar esta solução

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