

Tutorial 13

COMP 335: Introduction to Theoretical Computer Science

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Outline

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Question 1

Give transition diagrams for Standard Turing Machines that accept the following language.

$$L = \{0^{2^n} \mid n \geq 0\}$$

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Question 2

Give transition diagrams for Standard Turing Machines that accept the following language.

$$L = \{w\#w \mid w \in \{0,1\}^*\}$$

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Question 3

Give transition diagrams for Standard Turing Machines that compute the following function.

$$f(1^n) = 1^{2n}$$

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Question 4

Give transition diagrams for Standard Turing Machines that compute the following function.

$$f(1^n \# 1^m) = 1^{m \times n}$$