Algorithms & Models of Computation CS/ECE 374, Fall 2020

8.4

Languages defined by a Turing machine

Recursive vs. Recursively Enumerable

<u>Recursively enumerable</u> (aka <u>RE</u>) languages

 $L = \{L(M) \mid M \text{ some Turing machine}\}.$

Recursive / decidable languages

 $L = \{L(M) \mid M \text{ some Turing machine that halts on all inputs}\}$.

Fundamental questions:

- What languages are RE?
- Which are recursive?
- O What is the difference?
- What makes a language decidable?
- \odot How much wood would a TM chuck, if a TM could chuck wood?

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How was the Turing Machine invented...



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THE END

(for now)

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