

PART 3:

Automata:

Turing Machines

Computability Theory:

Church-Turing Thesis

Unsolvability/Undecidability of the Halting Problem

Decidable & Non-Decidable Languages

Semi-Decidable & Non-Semi-Decidable Languages

Turing Machines

Readings

Chapter 17:

Sections

17.1

17.2

17.3

17.6

17.7

Exercises

Chapter 17:

1 - a

13

14

The Church-Turing Thesis

Readings

Chapter 18:

Sections

18.1

18.2

Exercises

Chapter 18:

1 - b

Unsolvability (Undecidability) of the Halting Problem

Readings

Chapter 19:

Sections

19.1

19.2

19.3

Exercises

Chapter 19:

1

2

Decidable Languages and Semi-Decidable Languages

Readings

Chapter 20:

Sections

20.1

20.2

20.3

20.4

20.5

20.6

Exercises

Chapter 20:

7

12

13

Non-Decidable Languages and Non-Semi-Decidable Languages

Readings

Chapter 21:

Sections

21.1

21.2

21.3

21.4

21.6

21.7

Exercises

Chapter 21:

$1 - i$

4

$5 - a$

$11 - a$

14

HW #3

- **Chapter 17:** Exercise #1-(a), #1-(b), #13 and #14.
- **Chapter 18:** Exercise #1-(c).
- **Chapter 19:** Exercise #1.
- **Chapter 20:** Exercise #12.
- **Chapter 21:** Exercise #1-(b), #9-(g) and #14.