

CS510 Assignment #4

Do the following exercises from the textbook.

1. Exercise 4.2.
2. Exercise 4.3
3. Exercise 4.4
4. Exercise 4.6 (b, c, e, f)
5. Let A be the set of all functions from natural numbers (\mathbb{N}) to natural numbers:
 $A = \{f \mid f \text{ is a function, } f: \mathbb{N} \rightarrow \mathbb{N}\}$, where $\mathbb{N} = \{1, 2, 3, \dots\}$.
Show that A is uncountable using a proof by diagonalization.
6. Exercise 4.8
7. Exercise 4.13

What to submit:

Submit answers to all the questions on Canvas as a pdf file.