

In-Class Worksheet

Discrete Math & Functional Programming— CSCI 054— Spring 2025

Instructor: Osborn

Let the universal set be $U = \mathbb{Z}^+$, $A = \{n : n \geq 6\}$, and $B = \{1, 2, 4, 5, 7, 8\}$.

What are:

- A^C

- $A \cap B$

- $A \cup B$

- $|B|$

Are either A or B a subset of the other?

Give an example of a proper superset of B .

How would you define the function for “and”?

How would you define the function that takes two real numbers and returns their average?

What are the domain, co-domain, and range for:

- $f : \mathbb{Z} \rightarrow \mathbb{Z}$, where $f(x) = 2x$?

- $g : \mathbb{R} \rightarrow \mathbb{R}$, where $g(x) = \frac{1}{x}$?