## In-Class Worksheet

## Discrete Math \& Functional Programming- CSCI 054— Spring 2024 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 $f(x)=2 x$ ?
- $g: \mathbb{R} \rightarrow \mathbb{R}$, where $g(x)=\frac{1}{x}$ ?

