Sets and functions
Module Reflection

- Fundamental ideas in mathematics, sets and functions are important in many areas of study, including discrete mathematics, calculus, and algebra. Comprehending these ideas and their functions is crucial for addressing issues and applying mathematical logic.

  - ✓ Sets:
    - Clarification: A grouping of unique components or items is called a set. Any type of element can be used, including characters, numbers, and even other sets.
    - Defining: Usually, sets are indicated with curly braces '{}'. For instance, the set A={1,2,3,4} denotes a set named A^- that consists of the elements 1, 2, 3, and 4.
    - Establish Operations: Sets can be subjected to a number of operations, such as union, intersection, difference, and complement.

  - ✓ Sets Operations:
    - Union (U): All of the unique components found in either set are contained in the union of the two sets, A^- and B^-.
    - Intersection (∩): Every element shared by sets A^- and B^- is present at their intersection.
    - Difference (A^--B^- or $A^-\backslash B^-$): There are items in the difference between sets A^- and B^- that are present in set A^- but absent from set B^-.
    - Compliment (A^1 or A^c): Every element in the universal set that isn't in set A^- is in set B's complement.

  - ✓ Function:
    - Clarification: A relation where each input is associated to exactly one output is known as a function. It is defined as follows: a set of inputs (domain) and a set of possible outputs (codomain).
    - Defining: Maps or ordered pairs are common ways to depict functions.
    - Different Function Types: Properties such as injective (one-to-one), surjective (onto), and bijective (both injective and surjective) can be used to categorize functions.

- Finding set properties, executing set operations, and evaluating functions are only a few of the set and function-related issues that must be solved in assessments.
- Comprehending the attributes and functions of sets and functions is essential for providing precise answers to evaluation problems and showcasing mastery of mathematical ideas.