Lyceum paradise academy

Mathematics

Class 9

Unit one

Set

Well defined objects having some similar properties.

•specification of sets

1.Tabulation or Listing or Roster method.

In this method the elements of the set are enclosed within the middle brackets,{} and separated by commas .Eg P={a,e,I,o,u}

2.Description Method

In this method the set is specified by descriptive phrase and the description is enclosed within braces{}.

Eg.P={odd numbers less than 10}

3 . Rule or set builder method

In this method the elements or members of a set are represented by their properties in symbolical statement,Eg A={x:x is even number,x<10}

•Types of set

1 Empty set or null set or void set

A set having no element or member is called null set or empty set or void set .

P={number between 10 and 11}

2.Unit or Singleton set

A set containing only one element or member is singleton or unit set.

Eg.A={odd number between 2 and 4}

3.Finite set

The set containing Finite number of elements is Finite set.

Eg A={odd number between 1 to 100}

4 . Infinite set

The set containing Infinite number of elements is an infinite set.

Eg B={Odd natural numbers}

•Cardinal number of a set

The number of elements in a Finite set is called cardinal number of the set.

Eg if A={10,20,30,40,50},cardinal number of A or n(A)=5

•Sub sets

In two sets A and B ,if every element of set A is a number in set B,then A is a subset of B.

Eg A={1,2,3},B={1,2,3,4,5}

•Equal sets

Two sets having same members or elements are called equal sets.

Eg A={p,q,r,s},B={s,r,q,p}

A=B

•Equivalent set

If the number of elements in two Finite sets are equal,they are equivalent sets.

Eg A={1,2,3,4} B={4,5,6,7}

n(A)=4,n(B)=4

Hence A and B are the equivalent sets.

Exercise 1

1. If A={a,e,I,o,u} and B={a,e,I } .Write the relation between setA and set B.
2. If P={mathematics}.find the cardinality of set p
3. If set A={.........11,12,13,.....19,....}, which type of set A
4. Define

   a.sub set

   b.equivqlent set

   c.equal set.

   The end