## Covid 19 Sathi Pasala – Grade 9 2<sup>nd</sup> Week of September 22 - Sets

\*Set is a collection of items that can be clearly identified. To recall your previous knowledge engage in the Review exercise.

Finite sets and Infinite sets
Sets with a specific number of elements, are known as finite sets.

Eg:- A {Students of a class} B {Even numbers below 100}

Sets that have an infinite number of elements are known as infinite sets.

Eg : P {Multiples of 2} Q {Polygons}

## Equivalent sets and Equal sets

If the number of elements in the two sets are equal, then those are called as Equivalent sets.

Eg:- A {Vowels} B {Odd numbers between 0 and 10} A {a, e, i, o, u} n(A)=5 B {1, 3, 5, 7, 9} n(B)=5 n(A)= n(B)

Therefore A and B are Equivalent sets

Sets which have the same elements are known as Equal sets.

Eg:- P {Multiples of 2 below 10} Q {Even numbers between 0 and 10}

> P {2, 4, 6, 8} Q {2, 4, 6, 8} Therefore P and Q are Equal sets

Now engage in the exercise 22.1

## Subsets

When two sets A and B are considered, if all the elements in set B are also in set A, then set B is called as a **subset** of set A

Eg:- A {2, 3, 7, 8, 9}

Following are the few subsets of A.

P {2, 3} Q {7} R {3, 8, 9} S {2, 3, 7, 8, 9}

If P is a subset of A, this can be denoted as  $P \subset A$ 

✤ Universal sets

A {Students of our class} B {A/L students of our school} C {Grade 9 students of our school}

The elements of all the above sets are considered in the set of all students in the school. This can be considered as the **universal set** 

A universal set is a set which contains all the elements under consideration. Universal sets are denoted by  $\varepsilon$ .

 $\varepsilon$  {Students of school}

Now you can engage in Exercise 22.2