VENN DIAGRAM BASED ON NUMBER/ALPHABET

Venn Diagram

A Venn diagram is used to visually represent the differences and the similarities between two concepts. Venn diagrams are also called logic or set diagrams and are widely used in set theory, logic, mathematics, businesses, teaching, computer science, and statistics.

Let's learn about Venn diagrams, their definition, symbols, and types with solved examples.

What is a Venn Diagram?

A **Venn diagram** is a diagram that helps us visualize the logical relationship between **sets** and their elements and helps us solve examples based on these sets. A Venn diagram typically uses intersecting and non-intersecting circles (although other closed figures like squares may be used) to denote the relationship between sets.



Venn Diagram Example

Let us observe a Venn diagram example. Here is the Venn diagram that shows the correlation between the following set of numbers.

• One set contains even numbers from 1 to 25 and the other set contains the numbers in the 5x table from 1 to 25.

• The intersecting part shows that 10 and 20 are both even numbers and also multiples of 5 between 1 to 25.



In the following questions, answers are to be based on the diagrams given below, where the triangle represents doctor, the circle represents players and the rectangle represents artists.



I. Which numbered space in the diagram represents doctors who are also players and artists?

- (a) 2
- (b) 3
- (c) 4
- (d) 5

Ans. (d)

Sol. The required region is the one that is common to the triangle, circle, and rectangle i.e. 5.

II. Which number represents artists who are also players only?

- (a) 4
- (b) 6
- (c) 7
- (d) 8
- Ans. (b)

Sol. The required region is the one that is common to the rectangle and the circle but lies outside the triangle i.e. 6.

III. Which number represents artists who are neither players nor doctors?

(a) 1

- (b) 2
- (c) 3
- (d) 4

Ans. (a)

Sol. The required region is the one that lies inside the rectangle but outside the circle and the triangle i.e. 1