CBSE Class 10 Maths Notes Chapter 14: Probability

One of the key ideas in Math for Class 10 CBSE is probability, which is a measurement of the likelihood that something will occur. This chapter logically builds upon previously taught ideas and uses them to solve real-world problems. Probability is an important skill utilised in industries such as science, finance, and statistics. It has also been a core element of the curriculum. To guarantee that students ace their examinations, these Class 10 Chapter 14 notes from CBSE have been created to simplify an apparently complex subject by clearly explaining the concepts, offering the necessary formulae, solved examples, rapid revision advice, and much more.

CBSE Class 10 Maths Notes Chapter -14 Probability - Revision Notes

1. Important Concepts in Probability:

Experiment and Outcome:

- An **experiment** refers to an action or trial that leads to outcomes. For example, rolling a die.
- An **outcome** is a possible result of an experiment. For a die, the outcomes are 1,2,3,4,5,6.

Sample Space:

The sample space is the set of all possible outcomes of an experiment. For instance, in tossing a coin twice, the sample space is {HH, HT, TH, TT}.

Event:

An **event** is a subset of the sample space. For example, getting an even number when rolling a die is an event {2,4,6}.

Types of Events:

- **Simple Event**: An event with a single outcome (e.g., rolling a 3 on a die).
- **Compound Event**: An event with more than one outcome (e.g., rolling an even number).

2. Definitions:

- **Probability**: The probability of an event is the ratio of the number of favourable outcomes to the total number of outcomes in the sample space.
- **Complementary Events**: Events that are mutually exclusive and exhaustive. For example, if A is rolling a 6 on a die, the complement is not rolling a 6.

3. Formulas:

Probability of an event *P (E):*

$$P(E) = \text{Number of favorable outcomes} / \text{Total number of outcomes}$$

Probability of complementary events:

$$P(\text{Not } E) = 1 - P(E)$$

Probability in case of equally likely outcomes

P (E) = Number of outcomes in E / Total number of outcomes in Sample Space

4. Tips and Tricks:

- **Visualise the Problem:** For compound experiments, make use of tree diagrams or tables so that results can be readily seen.
- **Verify Total Probability:** The probabilities of all possible events in a sample space always add up to 1.
- **Simplify Compound Events**: Break compound events into simple events to calculate probabilities step by step.

Key Features of CBSE Class 10 Maths Notes Chapter 14 Probability

- **Detailed Explanations**: The notes provide a detailed breakdown of key concepts, such as sample spaces, events, and types of probability. Simple examples are used to clarify each concept.

Solved Examples: The notes include solved problems, such as:

- **Example:** A coin is tossed twice. Find the probability of getting at least one head.
  Solution: Sample space: {HH, HT, TH, TT}
  Favorable outcomes: {HH, HT, TH}
  Probability = 3/4

- **Formula Tables:** All important formulas are summarised in an easily readable table format, which makes it ideal for quick revision before exams.

- **Practice Problems**: Students may test their understanding and hone their problem-solving abilities with the aid of the notes' practice problems, which range from simple to complex.

- **Graphical Representation**: Probability trees and Venn diagrams are used to visually represent difficult issues and promote comprehension.

- **Exam-Aligned Content:** To guarantee that students are fully prepared for exams, notes are created carefully in accordance with the CBSE syllabus, focussing primarily on high-weight themes.

- **Real-World Applications**: Real-life examples, such as calculating probabilities in games, lotteries, and weather predictions, make the topic relatable and engaging.

- **Revision-Friendly Format**: Important points, definitions, and formulae are highlighted for rapid revision. This facility proves to be very useful at the time of last minute preparation for exams.

Students may get a strong grasp of probability and feel comfortable tackling problems pertaining to this topic with the

help of these CBSE mathematics notes for class 10, Chapter 14. Learning is comprehensive and in line with the standards of the CBSE test, thanks to thorough explanations, practice problems, and real-world applications.