

LESSON PLAN

CHAPTER-15: PROBABILITY

Unit	Probability
Periods	4 days
Previous knowledge	Probability – an experimental approach (already studied in class ix)
Objectives	Learners will be able to • Understand the concept of Theoretical probability • calculate the probability of an Event, total outcomes of the Experiments , Elementary Event , Complement of an Event, Sure Event and Impossible Event. • Solve the questions based on theoretical probability.
Teaching aids	Coins , playing cards , dice etc

PREVIOUS KNOWLEDGE TESTING

TEACHER'S ACTIVITY	STUDENT'S RESPONSE
Teacher will ask students that what are the chances that today it will rain?	Students will say that it will be 50% chance that it will rain as they could not see any cloud.
Teacher will ask about the terms Event, trial, outcomes.	Students will answer the questions
Teacher will ask about theoretical probability	No response

ANNOUNCEMENT OF THE TOPIC

TODAY WE WILL LEARN ABOUT THE THEORETICAL AND EXPERIMENTAL PROBABILITY

TEACHER'S ACTIVITY	STUDENT'S RESPONSE
CONCEPT EXPLANATION Teacher will explain the concept of theoretical probability. It is the ratio between the no. of ways in which an event can occur and total number of possible outcomes in sample space. EXPERIMENT Teacher will give an activity to students to perform so that the concept of probability will be more clear to them. Teacher will divide the class in few groups and ask them to perform an experiment as follows: Teacher will give three coins to each group and direct them to toss and tell them to note down all the outcomes. From the outcomes students will find the experimental probability of getting at least two heads. Teacher will ask the students to check the outcomes of the experiment using theoretical probability. Once the activity is done teacher will explain the difference between the experimental and theoretical probability. Teacher will provide some data to find the probabilities of different events. Teacher will tell students to find how probability is used in various occupations such as health care, car insurance , advertising , farming and weather forecasting. $P(E) = \frac{\text{No. of outcomes favourable to E}}{\text{No. of all possible outcomes of the experiment}}$ Teacher will solve some questions from the textbook	Students will listen to the teacher carefully. Students will do the activity and note down the outcomes of their experiment in a sheet. Students will do as directed. Students will listen to the teacher carefully and they will be able to explain the concepts such as equally likely outcomes, sure event, impossible event, complement of event. Students will listen and observe carefully Students will note down the formula in their notebook. Students will solve the questions.

Recaptulisation

- So today we have learnt about experimental and theoretical approach of probability.
- $P(E) = \frac{\text{NO. OF OUTCOMES FAVRRABLE TO E}}{\text{NO. OF ALL POSSIBLE OUTCOMES OF THE EXPERIMENT}}$.
- The probability of a sure event is 1.
- The probability of an impossible event is 0.
- For any event $P(E) + P(E^c) = 1$

HOME ASSIGNMENT

Q1. A Bag contains 10 red balls, 5 blue balls, and 7 green balls. A ball is drawn at random. Find the probability of this ball being not a blue ball.

Q2. Cards, marked with numbers 5 to 50, are placed in a box and mixed thoroughly. A card is drawn from the box at random.

Find the probability that the number on the taken out card is:

- i) A prime number less than 10
- ii) A number which is a perfect square.

Q3. Two dice are thrown simultaneously. What is the probability that

- i) 5 will not come up on either of them?
- ii) 6 will come at least one ?
- iii) Sum of 5 will come?

