

ATOMIC ENERGY EDUCATION SOCIETY
STUDY MATERIAL

CLASS: VIII

SUBJECT : MATHEMATICS

UNIT 5 – DATA HANDLING
MODULE - 5/5

Chance or Probability

Random Experiment

A **random experiment** is one whose outcome cannot be predicted exactly in advance

Example : Throwing a dice, Tossing the coin

Equally Likely outcome

Outcomes of an experiment are **equally likely** if each has the same chance of occurring.

There are certain experiments whose outcomes have an equal chance of occurring.

Example

In tossing the coin, both head and tail can come equally likely

In throwing the dice, all the number 1, 2,3,4,5,6 can come equally likely

Event

One or more outcomes of an experiment make an **event**.

Example

Getting a tail in tossing a coin is an event

Getting a number 1 or getting number 2 .. in a throw of dice are also event

Getting an odd number in a throw of dice is also an event. The event will contain 1,3,5 as outcome

Probability

Probability is calculated as

$$\text{Probability of an event} = \frac{\text{Number of outcomes that makes the event}}{\text{Total number of outcomes of the experiment}}$$

This is applicable when the all outcomes are equally likely

Chances and probability are related to real life.

1. To find characteristics of a large group by using a small part of the group.

For example, during elections ‘an exit poll’ is taken. This involves asking the people whom they have voted for, when they come out after voting at the centres which are chosen off hand and distributed over the whole area. This gives an idea of chance of winning of each candidate and predictions are made based on it accordingly.

2. Metrological Department predicts weather by observing trends from the data over many years in the past.

PREPARED BY

S.Anitha

TGT (Maths/Phy)

AECS-1, Kalpakkam