

FlexiPrep

NCERT Class 9 Solutions: Probability (Chapter 15) Exercise 15.1-Part 3

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If the **outcomes** of an event are **equally likely** then calculate the probability using the formula:

$$\text{Probability of an event} = \frac{\text{Number of successful outcomes}}{\text{Total number of possible outcomes}}$$



For example, a bag contains 1 yellow, 3 green, 4 blue and 2 red marbles.

What is the probability of pulling a green marble from the bag without replacement?

$$P(\text{green}) = \frac{3}{10} \quad \text{or} \quad 0.3 \quad \text{or} \quad 30\%$$

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Q-6 Following table shows the performance of two sections of students in Mathematics test of 100 marks.

Mark	Number of student
0 – 20	7
20 – 30	10
30 – 40	10
40 – 50	20
50 – 60	20

60 – 70	15
70 – above	8
Total	90
<i>Mathematics test marks of 100 students are given</i>	

I. Find the probability that a student obtained less than 20% in the mathematics test.

II. Find the probability that a student obtained marks 60 or above.

Solution:

Total numbers of students = 90

Solution I:

Numbers of students obtained less than 20% in the mathematics test = 7

Required probability = $\frac{\text{Numbers of students obtained less than 20 \% in the mathematics test}}{\text{Total numbers of students}}$

$$= \frac{7}{90}$$

Solution II:

Numbers of student obtained marks 60 or above = 15 + 8 = 23

Required probability = $\frac{\text{Numbers of student obtained marks 60 or above}}{\text{Total numbers of students}}$

$$= \frac{23}{90}$$

Q-7 To know the opinion of the students about the subject statistics, a survey of 200 students was conducted. The data is recorded in the following table.

Opinion	Number of students
Like	135
Dislike	65
<i>Distribution of opinion</i>	

Find the probability that a student chosen at random

I. Like statistics

II. Does not like it.

Solution:

$$\text{Total numbers of students} = 135 + 65 = 200$$

Solution I:

$$\text{Numbers of students who like statistics} = 135$$

$$\begin{aligned}\text{Required probability} &= \frac{\text{Numbers of students who like statistics}}{\text{Totla number of student}} \\ &= \frac{135}{200}\end{aligned}$$

Solution II:

$$\text{Numbers of students who does not like statistics} = 65$$

$$\begin{aligned}\text{Required probability} &= \frac{\text{Numbers of students who does not like statistics}}{\text{Totla number of student}} \\ &= \frac{65}{200} \\ &= \frac{13}{40}\end{aligned}$$

Developed by: [Mindsprite Solutions](#)